

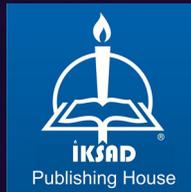
ECONOMIC, SOCIAL AND CULTURAL EVALUATION OF THE IMPACTS OF THE COVID-19 PANDEMIC IN THE AGE OF GLOBALIZATION

EDITED BY

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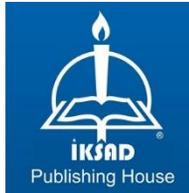
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Development and Social
Researches Publications®
(The Licence Number of Publisher: 2014/31220)
TURKEY TR: +90 342 606 06 75
USA: +1 631 685 0 853
E mail: iksadyayinevi@gmail.com
www.iksadyayinevi.com

It is responsibility of the author to abide by the publishing ethics rules.
Iksad Publications – 2021©

ISBN: 978-625-8423-23-5
Cover Design: İbrahim KAYA
August / 2021
Ankara / Turkey
Size = 16x24 cm

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PREFACE

The Covid-19 pandemic, which emerged in Wuhan, People's Republic of China in December 2019 and spread all over the world from the first months of 2020 and was declared a global pandemic "Pandemic" by the World Health Organization on March 11, 2020, has profoundly affected all humanity economically, socially, psychologically and culturally. There's not a single person left on earth who hasn't touched their lives.

Countries have closed their borders as part of epidemic measures, and long-term curfews in the country have deeply affected human beings, which are a social entity. The Covid-19 pandemic is the world's biggest health crisis since the Spanish Flu pandemic, which caused 6 major fluctuations and millions of deaths in 1918-1920. The effects of the Covid-19 pandemic are still continuing with the emergence of new variants. Nothing is the same anymore. Moreover, uncertainty remains regarding the duration of the Covid-19 pandemic.

The pandemic process has made radical changes to the entire life of mankind economically, socially, culturally and technologically. In this book study, our authors tried to examine the impact of the pandemic process in all areas of human life. A multifaceted analysis of the pandemic, which has deep touches in every aspect of our lives, was tried to be carried out. I wish that this book study, which examines the effects of the world's biggest health crisis in a century, will make an important contribution to all researchers interested in the subject.

Associate Professor Gokhan OFLUOGLU /

26/12/2021

CHAPTER 1

**MULTI-CRITERIA DECISION-MAKING TECHNIQUES
APPLIED ON COVID-19 STUDIES: A REVIEW**

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INTRODUCTION

SARS-CoV-2 virus (the virus that causes Covid-19) has caused a serious pandemic that emerged at the end of 2019, affecting the whole world. This virus, which has emerged in Wuhan, China, is from the same coronavirus family as MERS (Middle East Respiratory Syndrome) and SARS (Severe Acute Respiratory Syndrome), which have caused epidemics in previous years (Alkan & Kahraman, 2021). Due to this viral respiratory disease, worldwide more than 200 million people have been infected, and more than 4 million death reported by the world health organization until September 2021(WHO, 2021).

The covid-19 disease has been transmitted through droplets. Respiratory droplet has caused the spread of the disease when close contact occurs. Viruses carried by respiratory droplets can infect people by infecting organs such as the mouth or nose through the hands and entering the body (Ghorui et al., 2021). Therefore, the transmission of infection has been very easy, and also the spreading speed has been quite high. As a result, it has taken all continents under its influence in a short time after its detection.

The problem of suddenly overcrowding hospitals and unavailability to access health services has evolved as a result of the rapid spread of disease (De Nardo et al., 2020b). Social movement restriction has been introduced to reduce social contamination (Hezer et al., 2021). Crowded places like schools, businesses, and eateries have been temporarily forced to shut down (Samanlioglu & Kaya, 2020). Also,

lockdowns have been implemented in several countries. In some countries, commercial processes have come to a halt (Özkan et al., 2021). International shipping has slowed or temporarily terminated. As a result, these restrictions have caused significant economic and social problems (Grida et al., 2020).

It has been quite tough to deal with the new worldwide challenge, the coronavirus pandemic. So, proper technic should be used to address a decision problem with conflicting criteria related to human life, huge industrial investments, government, or social matters. In particular, it should include professional knowledge of the methodologies employed, as well as the involvement of experiences relevant to each sector, which makes it easier to arrive at more realistic solutions to the problem (A. S. Albahri et al., 2021). Furthermore, the experts (doctors, health professionals, investment experts, etc.) opinions are unclear and vague. As a result, considering the high level of uncertainty, an appropriate solution approach must be utilized. The applied MCDM approaches are an acceptable strategy to address these hard issues to overcome the aforementioned obstacles.

This study has been carried out to determine which Covid-19 problems occur and which areas MCDM approaches have been employed the most. Also, this paper has been performed to identify which issues and MCDM approaches occur most frequently in coronavirus researches. Various MCDM problem-solving applying techniques have been investigated. An analysis of which problems emerged in which areas with the pandemic has been done.

1. Basic Principles in Multi-Criteria Decision-Making Method

Multiple Criteria Decision Making (MCDM) has been one of the most used methods in decision researches (Bait et al., 2021). In expert systems and operations research, MCDM has been a common technique that involves organizing, coordinating, and addressing decision difficulties using a variety of factors. When compared to traditional techniques, MCDM has been increasingly attracting acceptance due to its potential to enhance decision-making through a clearer, logical, and efficient methodology.

The activity of assessing or evaluating the logical approaches developed or available to address an existing challenge has been known as decision-making. The process of selecting one or more of the alternative behavior patterns faced by a person or an institution to accomplish a specific goal can be referred to as decision-making (Ortiz-Barrios et al., 2021). There have been some common basic steps and elements that makeup MCDM methods. The common basic stages in MCDM methods have been as follows (Velasquez & Hester, 2013).

Decision-making stages;

- Identifying the decision problem
- Creating a model
- Obtaining a solution with model
- Testing and analyzing the model and solution
- Implementing the decision

The most important aspects when making a decision have been a predetermined problem, the decision-makers, the purpose determination, multiple alternatives, and uncertainties. In MCDM operations, there have been a few fundamental principles to consider. The concept of decision-makers has been the first of these foundational concepts.

Decision-makers have been those who make choices from a variety of options. The concept of goal should be fulfilled by the willing criteria. The goal of the MCDM contributors has been to accomplish this objective. A set of possibilities or alternatives that may be used to solve the selection/ordering problem has been referred to as an alternative. The criteria can be defined as a set of qualitative or quantitative features that the chosen alternative should satisfy (O. Albahri et al., 2021).

Researchers have provided a range of MCDM approaches and methodologies to handle a variety of discontinuous situations in many disciplines over the years. In general, each MCDM approach weights or ranks the alternatives have based on a set of criteria. A decision matrix is used to handle decision-making problems by identifying the most eligible alternative(s) among a collection of alternatives based on the specified criteria (O. Albahri et al., 2021).

More than 40 MCDM techniques have been developed in the literature to present. Each method has its strengths and weaknesses. For this reason, studies in the literature have generally compared more than

one MCDM technique in solving the problem (Hallak & Miç, 2021). Thus, it has been revealed in which problem types and data types MCDM methods give better results. It has been also possible to examine at which points they had advantages and disadvantages over each other. To present, there have been a significant number of MCDM methods developed in the literature. In the tables below, the names of the employed MCDM techniques have been listed alongside their explanations.

The most important points for a scientific decision-making process to be effective have been the selection of criteria and the decision-making method suitable for the purpose. Analytical Hierarchy Process (AHP), among decision-making methods and techniques has been one of the most commonly used because of the advantages it offers (Samanlioglu & Kaya, 2020). AHP has been a method for determining priorities and ranking the alternatives to a problem. AHP has provided an evaluating approach to dealing with complicated decisions, including creating and weighting selection criteria, analyzing data collected for the criteria, and accelerating the decision-making process. The most obvious advantage of AHS has been the method for calculating their weight with its main function being the main and sub-criteria (Özkan et al., 2021).

Another widely used MCDM technique has been the TOPSIS method. The TOPSIS method aims to determine the decision option with the shortest distance from the positive ideal solution and the longest distance from the negative ideal solution (Majumder et al., 2020).

Another widely used method has been SAW (Simple Additive Weighting). In the SAW method, the benefit criterion value is crucial. For the benefit criterion; the alternative preference value is found by multiplying the value of each alternative in terms of each criterion by the maximum value divided by the criterion weight (Velasquez & Hester, 2013).

Many MCDM techniques have been developed to date. These methods have been applied in different ways depending on the type of problem. For example, uncertainty in the problems has been used to differentiate MCDM techniques with fuzzy logic (Özkan et al., 2021). In the table below, the MCDM methods used in the literature have been given with their explanations in Table 1.

Table 1: Multi-Criteria Decision Making Methods

METHOD	EXPLANATION
SAW	Simple Additive Weighting
WSM	Weighted Sum Model
WTM	Weighted Product Model
SWARA	Step-Wise Weight Assessment Ratio Analysis
SMART	Simple Multi-Attribute Ranking Technique
ARAS	Additive Ratio Assessment
AHP	Analytic Hierarchy Process
ANP	Analytic Network Process
PROMETHEE	Preference Ranking Organization Method For Enrichment Evaluations
MOORA	Multi-Objective. Optimization By Ratio Analysis
MULTIMOORA	Multiple Objective Optimizations On The Basis Of

ELECTRE	Ratio Analysis Plus Full Multiplicative Form
TOPSIS	Elimination And Choice Expressing Reality Technique For Order Of Preference By Similarity To Ideal Solution
VIKOR	Vise Kriterijumska Optimizacija I Kompromisno Resenje
OCRA	Operational Competitiveness Rating
EATWOS	Efficiency Analysis Technique With Output Satisficing
EATVIOS	Efficiency Analysis Technique With Input And Output Satisficing
DEA	Data Envelopment Analysis
MACBETH	Measuring Attractiveness By A Categorical Based Evaluation Technique
UTA	Utility Additive Method
UTADIS	Utilities Additives Discriminants
STEM	Step Method
PAPRIKA	Potentially All Pairwise Rankings Of All Possible Alternatives
VASPAS	Weighted Aggregated Sum Product Assessment
GRIP	Generalized Regression With Intensities Of Preference
ERA	Extreme Ranking Analysis
DEMATEL	Decision Making Trial And Evaluation Laboratory
EXPROM	Extension Of Promethee
MAUT	Multi-Attribute Utility Theory
MAVT	Multiattribute Value Theory
DRSA	Dominance-Based Rough Set Approach
MCHP	Multiple Criteria Hierarchy Process
ROVM	The Range Of Value Method
COPRAS	Complex Proportional Assessment Of Alternatives
COPRAS-G	The Complex Proportional Assessment Of

	Alternatives To Grey Relations
FMEA	Failure Mode And Effects Analysis
NSGA	Non-Dominated Sorting Genetic Algorithm
SMAA-TRI	Stochastic Multi criteria Acceptability Analysis
GIS	Geographic Information Systems
FDM	Fuzzy Decision Making Method
TRIZ	Theory Of Solving Inventive Problems
GRA	Grey relational analysis
GP	Goal Programming
CP	Compromise Programming
EVAMIX	Evaluation Matrix
LINMAP	The Linear Programming Technique For Multidimensional Analysis Of Preference

2. Application of Multi-Criteria Decision Making Methods in Health-Related Fields

The coronavirus (COVID-19) has been a disease that spreads quickly through the respiratory tract, so, it has mostly impacted the healthcare system. The demand for health services has risen dramatically as a result of the disease's rapid transmission and severe prognosis. Health care services have been at often inadequate as a result of this massive transmission speed. Table 2 below shows the decision-making studies for the problems related to Covid 19 in the field of the health system.

Table 2: Multi-Criteria Decision Making Methods used in Covid-19 Problems in Health Field

Authors	Methods Used	Field	Problem
(De Nardo et al., 2020a)	PAPRIKA	Health	Prioritization of hospital admission of patients with coronavirus
(Hezam et al., 2021)	NTP-AHP, NTP-TOPSIS	Health	Determination of the priority coronavirus vaccine groups
(Albahri et al., 2020)	BMW,DOSM	Health	Selection of donor and coronavirus patients for convalescent plasma transfusion
(Deringöz et al., 2021)	AHP, PROMETHEE, TOPSIS	Health	Selection of wearable health technologies to remotely monitor coronavirus patients
(Yurdakul et al., 2021)	AHP, ANP	Health	Evaluation of the hospitals for treatment of coronavirus patients

(A. S. Albahri et al., 2021)	TOPSIS	Health	Prioritization the asymptomatic coronavirus patients
(Majumder et al., 2020)	TOPSIS	Health	Evaluation of the main risk factor in death due to coronavirus
(O. Albahri et al., 2021)	q-RungOF-WZIC, DOSM	Health	Evaluation of coronavirus vaccine distribution
(Ruggeri et al., 2020)	MCDA	Health	Evaluation of new health innovations in coronavirus pandemic
(Abdelwahab et al., 2021)	AHP	Health	Selection of the vaccines in coronavirus pandemic
(Batur Sir & Sir, 2021)	HFLTS-AHP, VIKOR	Health	Evaluation of pain treatment in coronavirus patients
(Hashemkhani Zolfani et al., 2020)	CRITIC	Health	Selection of the hospital location in coronavirus pandemic
(Mardani et al., 2020)	HFS-SWARA, WASPAS	Health	Evaluation of digital health

intervention	in
coronavirus	
pandemic	

The Covid 19 virus has caused a pandemic. The word pandemic is the general name given to epidemic diseases that spread and show their effect in more than one country and continent in the world. The health system has been the first area to be devastated by the pandemic. Various problems have arisen as a result of the rapid exponential rise load in this field.

The determination of patient precedence in hospitals with capacity restrictions has been one of the first issues to arise. Limited intensive care units and their rapidly increasing need have caused priority selection problems among patients (De Nardo et al., 2020a). On the other hand, the disease's rapid spread creates difficulties for healthcare professionals attempting to treat patients. The rapid transmission of the disease has been a huge challenge for healthcare professionals trying to treat patients. For this reason, it has been necessary to reduce contact and to use remotely controlled technological devices to follow the patient (Deringöz et al., 2021).

Another important burden in the health system has been the treatment process of patients. Determining which methods have been effective in the treatment of Covid patients has been an essential part of the healing process (Albahri et al., 2020). Determining which strategies have been helpful in the treatment of Covid patients is a crucial step in the procedure (Batur Sir & Sir, 2021). The drugs given, the techniques

employed, the duration of time used, and the effects on recovery have been all critical aspects of the healing process. Another issue faced while examining the effects of the medications utilized on the patients. Many issues, such as respiratory problems or pain, have been investigated in Covid patients with MCDM techniques.

The treatment of Covid has shown a very rapid development until today. Firstly, methods such as plasma transfusion have been used (Albahri et al., 2020). Several Covid vaccines have been developed and have become the subject of numerous studies (Hezam et al., 2021). Afterward, with the implementation of vaccine, vaccine distribution, and determining priority groups issues arises (O. Albahri et al., 2021).

Vaccination research has been gradual and the side effects of vaccines have been unclear. The vaccinations' efficacy has been verified through three or four phases of testing. So, comparing their reliability has become a dilemma and MCDM methodologies have been used to compare the developed vaccinations.

On the other hand, early diagnosis and treatment have been critical because Covid is a flu disease that spreads rapidly (Özkan et al., 2021). Vaccines have been the most important in the fight against the virus. Vaccines against the coronavirus that caused the global crisis have been released, recently. As a result, timely vaccination has become essential in the fight against Covid-19. For this reason, rapid vaccination and delivery of the vaccine have become an issue of particular importance (Abdelwahab et al., 2021). Establishing the

vaccine supply chain and identifying the critical locations has been a critical decision that must be handled separately. On the other hand, vaccination has become a new issue in determining the priority of vaccinating various groups in society (Alam et al., 2021). So, again MCDM techniques have been used to develop solutions to all of these challenges.

Many firms have succeeded in producing vaccines to battle the virus that has stolen millions of people's lives all around the world. Strict regulations have been relaxed as a consequence of the vaccines developed. Return to ordinary routine like before coronavirus emerged has gained momentum. However, vaccination, with insufficient vaccine supply has been a challenging decision-making problem. Also, determining the vaccine's distribution network has been another decision that needed to be made (Alam et al., 2021).

3. Application of Multi-Criteria Decision Making Methods in Social, Education and Social Fields

The Covid pandemic is a flu pandemic that has had a huge impact on the people and their way of life. As a consequence, it has affected almost every aspect of life, not just the health industry. Apart from the health field, very different decision-making problems have occurred in many areas during the pandemic. Table 3 below shows which decision problems occur in which areas outside the health field and the methods used.

Table 3: Multi-Criteria Decision Making Methods Used in Covid-19 Problems in Other Fields

Authors	Methods Used	Field	Problem
(Alkan & Kahraman, 2021)	qROFS-TOPSIS	Government	Evaluation of strategies implemented in coronavirus pandemic By various governments
(Ortiz-Barrios et al., 2021)	AHP, TOPSIS	Industry	Enhancing the preparedness level of sales departments in pandemics
(Ilyas et al., 2021)	BWM, FTOPSIS	Industry	Supplier selection under pandemic constraint
(Grida et al., 2020)	BMW, TOPSIS	Industry	Evaluation of supply chain prevention policies in coronavirus pandemic
(Hallak & Miç, 2021)	F-AHP, MULTIMOORA	Social	Determination of the location of humanitarian relief warehouses in Syria in coronavirus pandemic
(Akbal & Akbal, 2020)	AHP	Education	Evaluation of distance education in coronavirus pandemic
(Bait et al., 2021)	AHP, TOPSIS	Industry	Selecting the suitable country location in Africa to boost both countries' growth and companies' performance in coronavirus pandemic
(Hosseini et al., 2021)	F-DEMATEL, F-VIKOR	Tourism	Determination of prioritizing the defined action plans to develop Ecotourism centers in coronavirus pandemic

(Hezer et al., 2021)	TOPSIS, VIKOR, COPRAS	Social	Evaluation of security level of countries in coronavirus Pandemic
(Chen et al., 2020)	F-TOPSIS, F-AHP	Industry	Evaluation of robustness of wafer factory in coronavirus pandemic in Taiwan
(Kaya, 2020)	MAIRCA	Government	Investigation of the effects of the Coronavirus pandemic on OECD countries' sustainable development
(Samanlioglu & Kaya, 2020)	HF-AHP	Government	Evaluate the importance of intervention strategy alternatives applied by various countries by policymakers, governors, and physicians.
(Nguyen et al., 2020)	G-DEMATEL	Social	Determination of sustainability of unemployment

In the struggle against the pandemic, community movements have shown to be more effective than individual measures. Collective measures are effective instead of individual measures in the fight against the pandemic. For this reason, within the scope of the fight against the coronavirus, states have had to make decisions that will affect the whole country (Ortiz-Barrios et al., 2021).

Countries that apply strict rules such as China have been successful in combating the pandemic. On the other hand, it has been seen that the steps taken by governments and, perhaps more importantly, the speed at which they take action have profound effects on the outcomes of the pandemic. As a result, it's become essential for governments to make fast and accurate decisions first (Hezer et al., 2021). Problems have arisen in every aspect of human life. All industries have been affected, from production to retail and transportation (Ortiz-Barrios et al., 2021).

The social and economic changes caused by the pandemic have put countries in a very difficult situation and caused a global crisis (Kaya, 2020). To deal with the coronavirus pandemic, countries all around the world have had to conduct significant measures because it has been crucial to be a resistant government both economically and socially to cope with it. While some nations can cope with this process more effortlessly due to their high level of development, but unfortunately undeveloped or developing countries have struggled with the pandemic, particularly in terms of social aid operations and effective, fast decision-making (Alkan & Kahraman, 2021). Social welfare programs have been even more vital to be in place for everyone, particularly in countries where there are additional conflicts like war, such as Syria (Hallak & Miç, 2021).

Due to the coronavirus pandemic, also in the industry, very challenging and urgent problems have arisen. At the peak spread of the pandemic particularly in cold seasons, international transportation has sometimes stopped and therefore the interruption of supply chains

has emerged. One of the main causes of this situation has been that some countries have had to go into a full lockdown since it has been unable to prevent the virus's accelerated spread. With logistical hitch, manufacturing has been delayed or stopped. The final products have been either delivered late or not at all (Grida et al., 2020).

Uncertainties and risks in the global market have increased because of the pandemic. As a result, estimating new investments during the pandemic era, when the risk is large, is extremely challenging. Implementing new technologies or making investments for a new marketplace has become very challenging due to the increase in risk. As a consequence, new investment difficulties have arisen as a result of the heightened uncertainty (Bait et al., 2021).

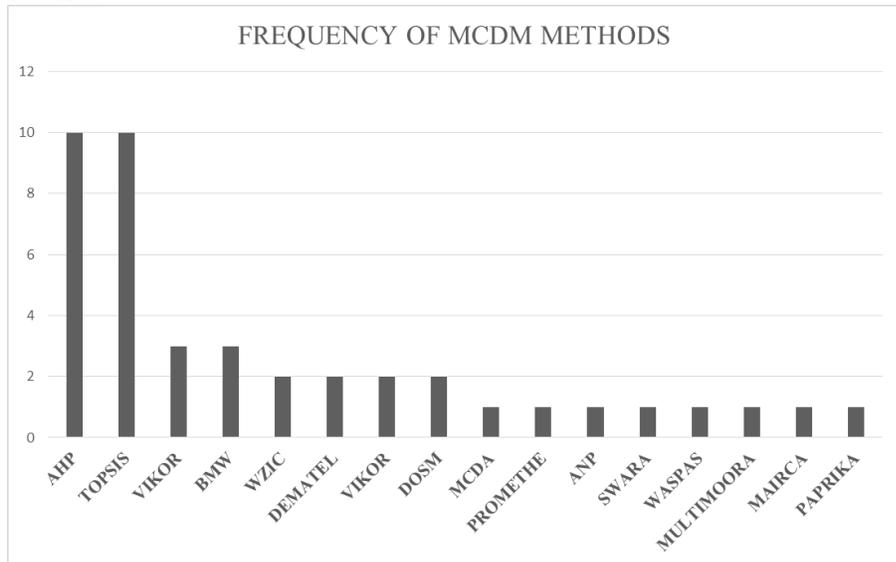
One of the most vital prevention in the critical spread of coronavirus has been the social distance. As a result, it has become essential to minimize overcrowding (Ghorui et al., 2021). Firms have been either closed or the number of workers in the business has been minimized in preventing the close contact of personnel in the sector. The number of staff has been reduced, and certain enterprises with a high social life have been temporarily shut down, to ensure social distance, especially in crowded working areas. Due to the social distance rule, the ready-meal sector of the food market, as well as restaurants and cafés, have been closed for periods or have been unable to find clients, because of social contamination fears of coronavirus (Alkan & Kahraman, 2021).

To decrease social contamination, the first measures taken by governments have been made to slow down social life. An example can be locking down the tourism places like hotels and entertainment industry like cinema, concert, and theater. Even after launching a series of severe restrictions, particularly tourism industries also have continued to struggle to attract customers because it has been safer for individuals to stay at home which decreases coronavirus disease transmission.

Educational institutions have also seen a lot of social activity and crowds. To limit the danger of transmission, governments have put a stop to face-to-face learning. Face-to-face education has had high interactivity and contamination risk. Education has been forced to be e-learning. Millions of students have struggled to continue their online education from their homes, and their education process has been damaged in several different ways (Akbal & Akbal, 2020).

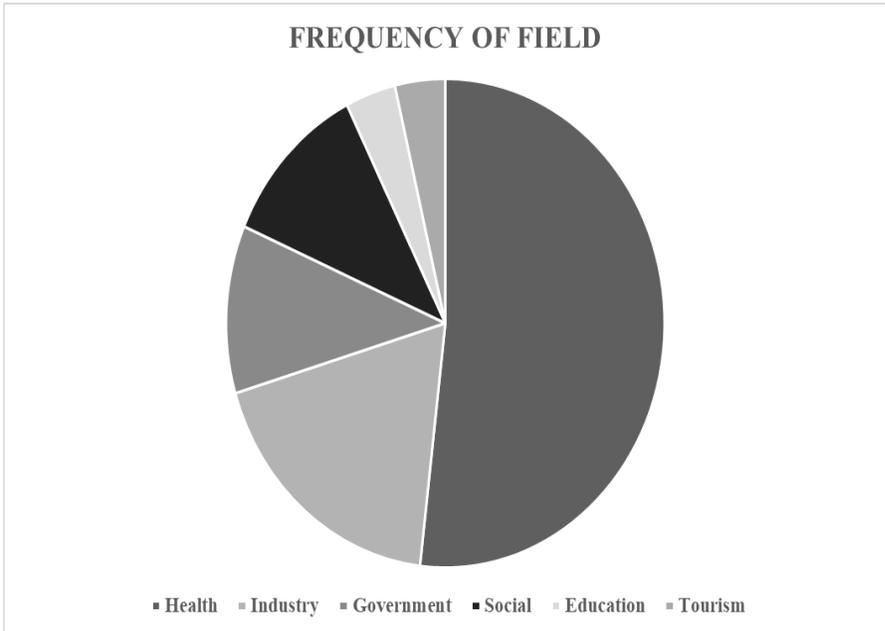
With the implementation of infection prevention and control strategies, it may be possible to decrease the spread of the infection in the communities, minimizing the number of people who become infected early in the pandemic and the number of cases that arise as a consequence of the pandemic (Ghorui et al., 2021).

Graph 1: Frequency of MCDM Methods used in Covid-19 Related Studies



MCDM techniques come in a variety of types and these techniques have been also employed in research with coronavirus. As shown in Graph 1, different types of MCDM techniques have been applied. Especially, AHP and TOPSIS techniques have been the most used in Covid researches, according to the graph. Also, The AHP and TOPSIS techniques are two of the most often employed approaches in the literature. BWM, WZIC, DEMATEL, VIKOR, DOSM, and VIKOR techniques have been placed in the second range of most employed approaches. The least widely used techniques have been PROMETHEE, ANP, SWARA, WASPAS, MULTIMOORA, MAIRCA, and PAPRIKA among MCDM techniques in Coronavirus related studies.

Graph 2: Frequency of Fields in Covid-19 Related Studies

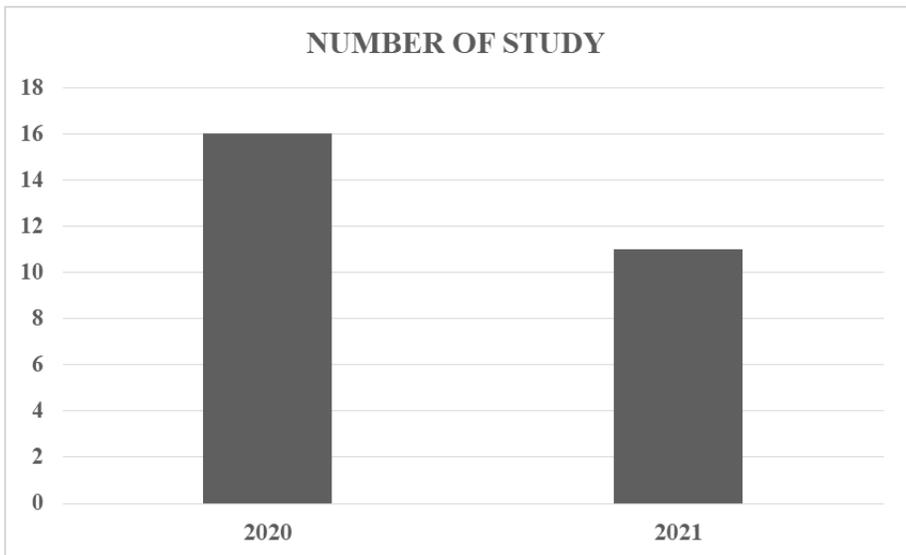


Businesses and individuals generally have encountered a range of decision-making challenges in their daily activities. So, decision making which has been the activity of assessing or evaluating the logical approaches developed or available to address an existing challenge is in all parts of life. In the health, social, education, or even in government field which has been a crucial part of human life, there have existed several decision-making problems. Nevertheless, as the pandemic has progressed, this situation has worsened due to greater uncertainty and a variety of challenges in every field. Most decision-making research has been apparent in the area of health, as shown by the circular Graph 2. The health field has been the most and first damaged field since the matter firstly emerged in the health sector and

problems related to the healthcare profession worsened with the pandemic. Secondly, the studies using MCDM techniques related to the pandemic have been related to the industry. Thirdly, due to the great importance of social decisions in the fight against coronavirus, decision-making studies have been carried out to evaluate the situation of governments. Studies in which MCDM techniques have been used, such as the development of countries, their ability to cope with corona, or the evaluation of their success in making rapid decisions such as pandemics, have been discussed.

Studies have been carried out in which coronavirus and MCDM techniques can be used in every area related to the human being. Social problems such as determining aid locations in countries where there has been war, such as Syria, have been also addressed during the pandemic period. Social problems areas such as education and tourism have also been handled. E-learning evaluation problems in education have been examined with decision methods. Also, in tourism, the ecotourism problem has been studied using MCDM techniques.

Graph 3: Frequency of Study with MCDM Techniques in Covid-19 Related Studies in 2020 and 2021



When the coronavirus studies using MCDM techniques have been analyzed by years, the number of studies conducted in 2020, which is the first year of the pandemic, has been slightly higher than in 2021 as shown in Graph 3. The reason why more MCDM studies have been conducted in 2020 may be that fast decision-making has been important in the first year of the pandemic. With the emergence of many decision problems with the pandemic, more work may have been done in 2020. Towards the end of 2021, the number of studies done in 2021 may increase and reach the number in 2020.

In 2020, with the urgent problem of the pandemic, much more vital problems such as capacity problems in hospitals, treatment of coronavirus infected patients, or increasing unemployment or

treatment issues have been discussed. On the contrary, less urgent issues such as investment problems under pandemic conditions have been discussed in 2021. After the widespread coronavirus vaccination, very strict social restrictions have been reduced. Social mobility has increased and the crisis created by the pandemic has started to decrease gradually.

CONCLUSION

In this study, studies on coronavirus using MCDM techniques have been examined. The MCDM methods used in these studies have been studied and the most and least preferred methods have been analyzed. It has been shown that the most preferred methods among the MCDM methods have been AHP and TOPSIS in Covid-19 related studies. While more vital decision problems caused by Covid-19 were addressed in 2020, the subjects studied in 2021 showed a tendency towards less vital problems caused by Covid-19 like an investment. The highest number of studies on the decision-making problems related to Covid-19 has been in the health system.

As more and more information is collected on the coronavirus day by day, it will facilitate future decision-making problems and studies. In the future, studies may depend on the subject of choosing among lots of coronavirus disease treatments. Also, there may be an increase in studies with less vital importance with the advances made in the treatment of coronavirus. Different types of MCDM techniques can also be used more in health-related decision problems. When the

previous studies are examined, since the data on vaccines will increase, comparison studies can be done with more information.

There may be an increase in studies with less vital importance with the advances made in the treatment of coronavirus. If the data on Covid-19 vaccines increase, comparison studies can be done with more information. As more and more information is collected on the coronavirus, future decision-making problems may be handled easier.

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CHAPTER 2

CREATING A SUSTAINABLE TOURISM MODEL IN NORTH CYPRUS USING NEW TECHNOLOGIES IN POST COVID-19 PERIOD

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INTRODUCTION

This study will review at the impacts of the Covid-19 Pandemic on the travel and hospitality sector in general, as well as how technology advancements may help bring tourism back to the global market in a sustainable way. Millions of people have died as a result of Covid-19 disease in last two years (Zhang et al., 2021). The Covid-19 has resulted in the deaths of almost four million people, as well as unemployment, physical and mental health problems, and economic and political constraints (Cristina-Andrada et al., 2020). It is possible to rebuild tourism and develop it sustainably using new technologies, well-planned health-care services, well-trained employees, good administration, and traditional tourist policy planning. Tourism can be used as a tool to promote sustainability and fight with poverty. The research's major purpose is to analyze current problems and come up with new solutions to solve the existing problems using new and modern technologies. The aim of the study is to show the technological point of Northern Cyprus and to strengthen the study with information about the sector and the world by making a literature review. It is a fact that the tourism sector in Northern Cyprus needs technological investments and there are serious infrastructural deficiencies in the country contrary to the technological applications applied in the world.

1. Covid-19 Pandemic and its effect on Tourism

After fuel and chemical sectors, tourism is the world's third-largest trading sector. It contributed around 7% of global revenues in 2019. It accounted for more than 20% of the GDP in some states (Gopalakrishnan et al., 2020). Covid-19 pandemic hit tourism sector drastically (Uğur and Akbıyık, 2020). Export revenues in the tourism sector decreased by \$910 billion in 2020 to \$1.2 trillion, resulting in an average of 2% decrease in global GDP. The tourism industry provides one in 10 jobs globally and generates both employment and income for millions of people in emerging and developed markets. More than 100 million tourism-related jobs are at risk because of the Covid-19 pandemic with the hospitality-related sectors such as accommodation and food services companies that employ approximately 144 million workers globally (Lala et al., 2020).

Women, who make up at least 54% of the workforce and also young workforce in the business, are the most vulnerable. All countries have been impacted, but destinations that rely on tourism growth to create jobs and enhance their economies have been affected most. This category includes Small Islands Developing States, Least Developed Countries and African countries. In the African region, the tourism sector reported 10% of all exports in 2019. The sudden decline in tourism decreases funding for biodiversity preservation 7% of world tourism associates with wildlife, a segment rising by 3% every year (Lindsey et al., 2020). The influence on biodiversity and ecosystems is especially vital in Small Islands Developing States and Least

Developed Countries. In many African regions, wildlife estimates for more than 80% of visits, and in many SIDS, tourism incomes support the conservation of marine. The Covid-19 Pandemic puts extra pressure on heritage protection, cultural and social fabric of communities, especially for aboriginal people and some ethnic groups. Many intangible cultural traditions such as special festivals, carnivals and holidays have been delayed and after the closure of handicrafts shops, indigenous women's incomes have notably decreased. About 90% of countries have temporarily closed World Heritage Sites, as well as 90% of museums, 13% of which may never reopen again (Tan et al., 2021).

2. Sustainable Tourism Development

Sustainable tourism is a tourism model that considers and tackles current and future economic, sociocultural, and environmental factors while serving the needs of visitors, the tourism industry, and host communities (Niedziolka, 2014). The environmental, economical, and socio-cultural components of tourism promotion and assurance of its long-term existence are all addressed by sustainability ideas, which necessitate a proper balance between three dimensions (UNTWO, 2005). Planning for optimal control of environmental resources is an important component in tourism expansion, maintaining vital ecological processes, and encouraging natural heritage and biodiversity conservation. Second one is recognition and respect for host societies' socio-cultural authenticity, established and existent cultural legacies, built values, and contributions to inter-cultural harmony and tolerance. Third one is to ensure realistic, long-term

economic transactions, contribute to socioeconomic interests that are properly distributed among all stakeholders, create stable workplaces, income-earning opportunities, social services for local residents, and contribute to poverty eradication. Sustainable tourism businesses need the competent support and broad cooperation of all relevant stakeholders, while they need political power that guarantees consensus building. Making tourism sustainable is a continuous process that requires consistent monitoring of impacts, elimination of necessary disruptions and taking further measures when necessary. Sustainable tourism should be the factor that guarantees utmost guest satisfaction and provides visitors with the experience that will raise their awareness of sustainability concerns and develop sustainable development programs among them. UNWTO organizes various programs for solving different issues related to Tourism and Sustainability (Gössling et al., 2012).

These programs includes biodiversity and climate change and other environment related topics. UNWTO aims to better tourism growth that promotes fairly the protection of biodiversity, human well-being and the economic stability of the host countries and societies. Also it emphasizes the importance of climate changes. The tourism industry is not solely highly dependent on environmental and climate changes but extremely defenceless to them. There are distinct threats, such as extreme weather events, boosting insurance expenses and security matters, water deficits, natural disasters, destruction of infrastructure and attractions at target places, that directly and indirectly influence the industry.

Global Tourism Plastics Initiative underlines the dilemma of plastic pollution in nature, especially oceans influence the tourism industry as well. However, this issue is excessively big to be solved by an individual organisation. That is why all of the stakeholders in the tourism industry should involve in the process of analyzing the problem of the sector and take required actions to overcome the obstacles. In the name of sustainability, the work of this initiative should be supported not only by government organizations but also by all tourism bodies, including private businesses. One Planet emphasizes that the accurately designed and managed tourism can become a powerful tool capable of stimulating job creation, improving comprehensive human integration, preserving natural, cultural heritages and biodiversities, creating sustainable sources of energy and improving human welfare. Resource Efficiency in Tourism on the other hand, aims to encourage stakeholders, assist them to plan and implement the SDGs through sustainable tourism development. The Small Island Developing States encounter many difficulties, due to their remoteness. It has multiple negative effects regarding their ability to remain part of the global supply chain, rises in import costs, particularly for energy and decreases their competitiveness in the market. Nowadays, global organisations such as United Nations, World Bank, WTO have designed multiple amounts of various programs and schemes for sustainability progression. However, as the practices show, those goals can be achieved only if every individual and organisation will unite to face and overcome the barriers together.

3. Tourism and the use of Technologies in North Cyprus

There are almost no industry and no businesses that do not use technology. Developing technology and the convenience it provides to humanity have had a positive effect on the progress of many transactions in a faster and easier way. One of the areas where technology has been used extensively, especially in recent years, is the tourism sector. The channels (constantly updated as content) that people in the tourism sector can use for activities such as reservation, transportation and accommodation have increased significantly (Maric and Zoroja, 2019). At the same time, businesses operating in the tourism sector are trying to integrate technology more into their work. In this respect, the current situation of the tourism sector cannot be compared with what it was years ago, and what will happen in the future will undoubtedly be incomparable to today (Khmiadashvili, 2019). The internet has made a significant contribution to the development of the tourism sector. Nowadays, people can make almost all of their travel and transportation plans over the internet. People can access various means of transportation with a single click, by questioning the most suitable options for them through channels where they can compare quality - price without wasting time on the internet (Siguencia et al, 2018). Through these channels, they can make reservations for hotels, get transfers to hotels, buy bus tickets and various tour tickets, and also find a rental car in the fastest way. There are many channels for them to share their post-travel experiences as well (Khmiadashvili, 2019). These channels provide

great opportunities for tourism businesses (especially accommodation and food and beverage businesses) to improve guest relations and improve their service quality in line with the feedback obtained. Examples of channels that can book accommodation and share travel experiences are TripAdvisor, Booking.com, Airbnb, Facebook and Instagram (Maric and Zoroja, 2019).

The Sojern Facebook and Instagram Advertising for Travel Report was prepared in 2019 with information gathered from interviews with more than 600 marketers in 46 countries. Travel marketers throughout the world are now allocating 47 percent of their entire marketing expenditure on digital platforms. Surprisingly, social networks account for 30% of investments, with 23% going to Facebook and Instagram and the remaining 7% going to Pinterest, Snapchat, Twitter, LinkedIn, and other sites. The usage plan for Facebook videos reached 60% in 2019, an increase of 3% compared to 2018 while the Instagram video usage plan was 43% in 2018, it reached 56% in 2019 (Hazen, 2019). The main challenges travel marketers face when it comes to Facebook and Instagram ads include fast advertising, making profits and keeping up with their technological environment (Gonzalo, 2019).

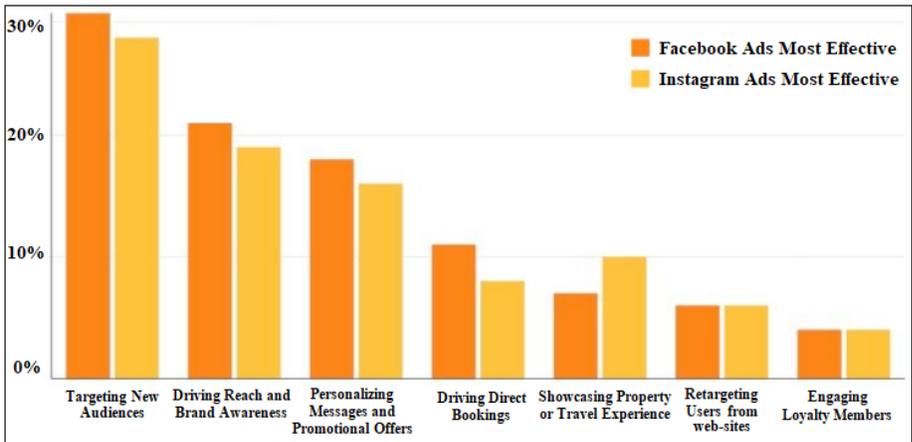


Figure I: Where Facebook and Instagram are most effective
 Source: Hazen, 2019.

The three leaders of the travel industry, Booking.com, Airbnb, and TripAdvisor, dominate the accommodation category. Travelers use these websites to book holiday rentals, hotels, apartments, villas, and other types of accommodations. Among all other similar websites, these travel sites are the most trusted and downloaded. These social media channels can be accessed at any time on smartphones, tablets, laptops and PCs with many different technological functions today (Pavlovic, 2020). The following table (table 1) is a comparison of these three channels:

Table 1: Booking.com vs Airbnb vs TripAdvisor: Comparison and Difference

Aspects	Booking.com	Airbnb	TripAdvisor
Revenue Model	Agency model	Agency model	Advertising Model
Revenue (in USD 2019)	\$15.07 Billion	\$38 Billion	\$939 Million
Commission From Hosts	10% - 30%	3% - 5%	3%
Guest Booking Fee	0%	6% - 15%	11%
Reviews by Guests	Yes	Yes	Yes
Reviews by Hosts	No	Yes	Yes
Instant Booking by Guests	Available on all listings	Optional	Optional
Payments Handled By	Host	Airbnb	TripAdvisor

Source: Booking.com vs Airbnb vs TripAdvisor: Comparison and Difference (Pavlovic, 2020).

As can be seen in the table 1, the more technologically offered options to the guests increase, the higher the profitability of these channels. While the number of users of Instagram, which Facebook bought for 1 billion dollars years ago, exceeded 1 billion, its annual revenues reached 20 billion dollars (Caliskan, 2020). 60% of millennial travelers on social media are active on Instagram, and 48% of Instagram users use the application to search new travel destinations and places to explore (Legan and Teague, 2020). Previously, the most popular channels in Northern Cyprus were channels such as TripAdvisor and Booking.com, but today Airbnb has caught these channels. The interest of the visitor section, which is generally composed of Russian and British guests, to Cyprus has increased through this channel (Charalambous, 2019). Many hotels focus on social media channels like instagram, facebook and youtube in terms

of developing the domestic tourism market in Northern Cyprus. Although the hotels have their own websites, there are travel agencies that many hotels work with. Thanks to these agencies, hotels are developing in terms of digitalization. Oscar Group (Including Oscar Hotel, Vuni Palace Hotel and Olive Tree Hotel, Oscar Rent-a Car etc.) and Northern Travel Ltd. (NTL), Acapulco Resort & Convention & Spa Hotel and DMG Cyprus Group with Akgunler Tourism (which organizes ferry services to Turkey), DMC with Dream Up, VIP passenger cars, Mercedes VITO and Cypro Bus, which offers transfer services by buses and Northern Cyprus Maestro DMC, which organizes MICE and congress operations for Especially during the Covid-19 pandemic period, hotels have made many developments in terms of both hygiene and technology (Biskin, 2019; IHA, 2012; Kadioglu, 2013). They use social media channels to attract guests to their brand. Many hotels use the hygienic standards and practices they have developed to attract their guests. For this, MNG Tourism has shared a video on YouTube for Merit International Hotels & Resorts, and Touristica for Acapulco Resort & Convention & Spa Hotel (MNG Tourism, 2020; Touristica, 2020). Merit International Hotels as a leading hospitality brand with 6 hotels and Ezic as a restaurant brand with 8 restaurants that make continuous technological investments in North Cyprus. Ezic was the first restaurant to receive the ISO 9001-2000 certificate in 2005. After 6 months, it received the HACCEP and ISO 22000 certificates, showing the importance he attaches to health and hygienic values (Akcaba, 2015). In addition, Ezic established the Ezic Restaurant Solar Power Plant. This power plant is also an

important example in terms of sustainability (Duser, 2018; Icer, 2016). While Merit International has 1,948 latest technology slot machines & 196 live game tables in a 16,000 m² gaming area, it has a 40% gaming market of North Cyprus. The hotels group affiliated to Net Holding, which also owns the construction sector, makes many infrastructural investments such as lighting in the areas where the hotels are located and purification works in the seas, not only in its own hotels (IHA, 2012; Net Holding, 2018).

In developing countries like North Cyprus most hotels the key technology is the Property Management Systems (PMS) (Maria et al, 2018). PMS can be defined as “a set of application programs that directly relate to hotel front office and back office activities e.g. revenue management, reservation management, room and rate assignment, check-in & out management, guest accounting, folio management, account settlement and room status management” (Bardi et al, 2003; Kasavana & Cahill, 2003; Kim & Ham, 2007). The Fidelio Opera PMS program is a technology that is currently used in 5-star hotels in Northern Cyprus and is constantly updating itself. This program provides many hotels with the opportunity to make transactions by establishing a connection between departments such as accounting, food and beverage management, housekeeping operations, and front office departments (Nirmala, 2021).

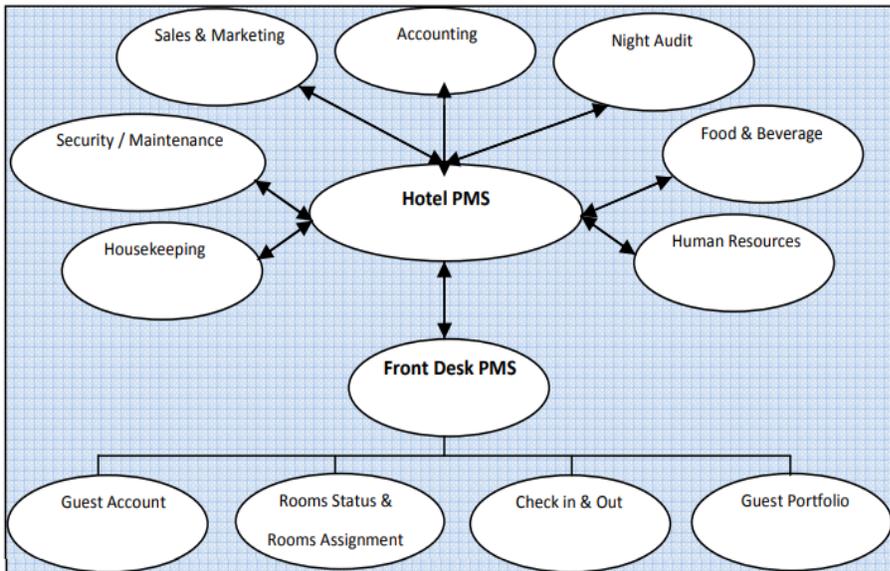


Figure 2: Typical Hotel PMS

Sources: Adapted from Kim & Ham, 2007; Kasavana & Cahill, 2003; Bradi, 2003.

T.R. Vice President Fuat Oktay, in his post for METU Kalkanli Technology Valley (KALTEV) on the Northern Cyprus Campus, stated that Northern Cyprus will make technology development investments in many strategic areas such as nanotechnology, renewable energy, defense industry and agriculture (Altas, 2019). On the other hand, there are plans to upgrade an old and constantly struggling internet infrastructure such as 3G to 4.5G in the short term for Northern Cyprus. Strengthening the infrastructure of Cyprus with new generation communication technologies is among the goals of Turkcell, a subsidiary of the Huawei Turkey brand (Guler, 2016).

Economically and socioculturally, the situation in the area was already dire. Covid-19, on the other hand, has had a significantly greater economic impact than any other disaster in recent years. Finding answers to economic, political, and socio-cultural issues is becoming an increasingly difficult task for tourism stakeholders. New technology and E-commerce are currently the most important factors in the travel and tourist business. It is especially true now, when IT is used in practically every aspect of the tourism and travel business by professionals. Technology has become a critical component in the development of tourist resilience. On the one hand, information technology looks to be highly effective and, in many ways, even necessary in dealing with pandemic-related problems. On the other hand, as a result of society's reaction to the crisis, there are more general concerns. The existing digital gap, vulnerability, privacy disinformation, and technology ethics, for example, could have major, long-term effects across all levels of e-Tourism. (Gretzel et al., 2020). Lau (2020) conducted multiple interviews with department heads and general managers from nine well-known hotel chains in China in order to learn about innovative technologies that are being used to mitigate the effects of the Covid-19 pandemic. All of the interviewees in Lau's study (2020) agreed that running a hotel during a pandemic is exceedingly difficult. Nonetheless, the majority of the interviewees viewed it as a once-in-a-lifetime opportunity, as only the best-prepared hotels would be able to survive. To accomplish so, these hotels are planning to use a number of new technology and business models that will improve cleanliness, support social distancing, and

provide clients with a comfortable and distinctive experience. Most of the surveyed hotels are working to advance and construct a brand of 5G smart hotel by providing an end-to-end 5G network with coupled terminals and cloud apps in order to improve system quality.

These hotels will be able to afford more transformative services in the near future, such as integrating their customer loyalty programs with AI (Artificial Intelligence) face recognition to recognize a guest upon entry, delivering automated and electronic room keys to the guest's smartphone, and using robot assistants to serve and assist customers in finding their rooms, making orders, or calling reception. Furthermore, 5G networks significantly improved the procedure of organizing online conferences. 5G networks also improve hotel live-stream conference capacity significantly. To improve the quality of the data, the hotels would run live adverts on a variety of internet sites, including social media. To fulfill these goals, innovative live-streaming content, such as entertainment videos, is used. To suit observer preferences and attract more potential customers, innovative live-streaming content, such as entertainment videos, is used. These hotels propose to expand their food and beverage offering services, serving not only to individual visitors but also to bulk buy consumers, in order to improve service quality. However, plans must be amended to accommodate delivery services, with special attention paid to whether the delivery is consistent with the hotel's brand image and adheres to local laws (Lau, 2020). As a developing country, Northern Cyprus has lagged far behind the world in terms of technological developments. Tourism is now a sector where robots enter tourism,

Virtual Reality is used as a tourism product, contactless QR and Hotel PMS and accordingly POS systems are used, and smart rooms are equipped with sound systems (Lukanova & Ilieva, 2019; Samala et al, 2020).

4. Methodology

This paper used the qualitative research method using the observations and secondary research approaches. The qualitative method was chosen due to its ability to simplify and explain complex matters, various ways of collecting data on delicate topics, cost-efficiency. Using the observation approach, the data gathered related to sustainable tourism development and technological innovations in North Cyprus. The information collected from four and five star hotels in Kyrenia, North Cyprus. Semi- depth interviews were conducted with 15 managers of 5 hotels operating in the area.

5. Findings

Sustainable tourism can be utilized as a tool to empower communities and help development in every aspect. Technological advancements cannot be beneficial to tourism firms unless they are sustainable. This study illustrates the alternatives that are sustainable and they are listed below:

- Poverty alleviation through sustainable tourism: For countries with lesser incomes and economic problems, tourism growth may be

critical. It has the potential to create jobs for local residents, improve their quality of life, and boost the economy. On the other hand, there is a risk of social and cultural displacement, as well as the loss of historical and environmental assets.

Because tourism is an important source of international trade income and produces new jobs in undeveloped and emerging nations with few other options for economic growth, sustainable tourism development is one of the greatest strategies to avoid such an effect. The taxes that tourism sector businesses pay to the state treasury can be used to improve the city's infrastructure, remote areas, education, and population health (Gössling, 2000). Tourism is a good tool for women's empowerment because it provides jobs and equitable possibilities for advancement while also helping to gender equality in impoverished countries. Locally owned businesses that provide hospitality services and products create more cash for the economy and locals, because tourists buy a wide variety of commodities and services. According to the UNWTO, incomes in the tourism sector can range from \$1,000 to \$4,000 per year, which is sufficient to overcome poverty and health difficulties on average. According to the International Labor Organization (ILO), the tourist industry employed over 260 million people in 2012. The number has fluctuated since then, but it has remained positive until the outbreak. Despite this, tourism is one of the world's fastest-growing and largest industries. The tourist industry employs young people under the age of 25. This provides young people with new opportunities, such as increased

salaries and future possibilities. As a result of tourism, many people with little or no formal training find new occupations. Tourism can aid neglected communities and individuals through a variety of concepts and tactics (Egerstrom, 2016).

- Tourism Industry Innovations Using New Technologies - New technologies are being used to improve operations, customer service, customer connections, and the establishment of new business models in the tourism industry.

The above provides numerous benefits to travelers, easing and improving their trip preparation and planning process. Travel has been revolutionized by technological advancements, and the latest advancements promise even better and more intriguing adventures for travelers.

In today's world, technology and tourism are a wonderful match. They have a big impact on the entire travel experience, from booking flights and hotel reservations to the meals at the destination and plans after coming home. According to a Google travel research (Tourism and Technology: How Tech Is Revolutionizing Travel, n.d.), 74% of visitors plan their vacations online, yet 13% prefer to book their excursions through travel agencies and tour operator businesses. Millennials have also affected and played a significant role in the creation of new tourism technology. This was the start of a new era of social media, apps, blogs, and television shows. Tourism has become even more popular as a result of technological advancements. New travel shows on television, as well as commercials for various travel

agencies, hotels, and casinos, drew viewers from all over the world. This was a watershed moment not only for tourism, but also for marketing and the entire commercial industry.

1. Tourism industry technological trends for sustainable growth and poverty reduction - Covid-19 has transformed the globe in a variety of ways. Many people tragically lost their lives.

It also resulted in higher unemployment rates, a shortage of medical supplies, and a shortage of health-care employees. Many businesses, as well as tourism and hospitality service providers, went insolvent. A number of tourist trends are based on more general shifts in consumer behavior, such as the request for healthy and natural foods and beverages, sustainability, individualized service, and the increasing demand to go digital. To adapt to the expanding customer needs during the coronavirus epidemic, it's critical to find out new tourism trends. Nonetheless, the majority of the models have risen as a result of widespread shifts in consumer behavior. The tourist trends listed below can be used as a response to the global pandemic that has impacted the tourism sector in general if implemented effectively (Revfine.com, 2020a).

2. Tourism Trends in Safety and Hygiene - Since the Covid-19 pandemic, health and hygiene protocols have strengthened and have been a top priority, particularly for airline companies, cruise lines, accomodation businesses, eateries, and other tourism and travel service providers.

As a result, they implemented a number of adjustments to their functions and operations, including increased hygiene, socially separated accommodations and seating, hand liquids, cleansers. Providing Covid-19 testing for their staff, and organizing isolated areas, and a variety of other measures are used to ensure people's hygiene standards as a novel marketing tactic to most tourism businesses. People are more hesitant to travel and visit sites because of the risk of corona, which means that ensuring protection of individuals and developing the best conditions for them is the secret to success during this time (Revfine.com, 2020a).

3. Shift from International to Local - The numerous travel limitations and the objection of many people to travel encourage the tourism industry to concentrate more on local consumers, rather than international.

However, this does not mean that the companies should give up on foreign tourists completely, they only need to temporarily adjust their marketing plans. For hotels, it is relevant to mention the facilities and equipment they have, such as restaurants, gym, good Wi-Fi connection that would be ideal for people who work remotely, but still want to relax or enjoy time with their families and friends. Airlines and other tourism service providers may also need to change their strategies and make domestic visitors a priority. Local consumers are less likely to cancel their reservations, as they only ought to consider restrictions on the local level and in most states do not have to quarantine after their vacation (Revfine.com, 2020a).

4. Advancement of Contactless Payments Technologies - Contactless payment methods have become a predominant technology in the tourism industry, and the appearance of alternatives like Google Pay and Apple Pay has taken it to the next stage, where guests do not need to have a debit or credit cards with them anymore to make payments.

Enabling contactless payments has allowed tourism companies to overcome discord and increase the speed of check-ins and check-outs. It also makes the selling and buying process very quick, stimulating spontaneous shopping. With the advent of coronavirus disease, contactless payment tools are in higher demand than ever, as workers and clients, for safety reasons, avoid handling cash or touching objects that other people did (Revfine.com, 2020b).

5. Voice Search & Voice Control - Smart speakers, as well as mobile assistants like Siri, Google Assistant and Bixby, are becoming more popular. Many people are adapting to voice search options or phone assistance while searching on the internet.

For the decision-makers in the tourism industry, it is essential to catch these individuals by structuring web pages' contents accurately so the guests can see and make their booking using the mobile assistant or voice search. Information is an important component of the client's experience, especially for tourism companies. Besides, to make the guests feel even more comfortable hotels can include smart speakers or other IoT gadgets that work interacting with voice control devices and enabling users to effortlessly turn devices on and off, change

settings inside their rooms or call reception and room service departments (Revfine.com, 2020b).

6. Virtual Reality (VR) - Another influential tourism trend is Virtual reality, which became very popular among young people and even experienced travellers (Revfine.com, 2020a).

Today, VR can become a prominent advantage over competitors for hospitality service providers. Through online VR tours, travellers can experience hotel rooms, restaurants, touristic places of interest and many other things from their houses. Moreover, they can do this at the decision-making stage of their trip. VR is uniquely valuable within the circumstances of Covid-19, where clients may have other ideas and may need further assistance to push forward with their plans. Modern VR tours are online-based and can be viewed using any web browser on the phone, tablet or PC. (Revfine.com, 2020b). With the virtual reality glasses produced with the latest technology, you can see the country, city, hotel, hotel room, etc. at one end of the world. we can have the chance to see it as if we were inside without going there. If these products find a place in the tourism sector, it is certain that they will be used as a marketing tool, especially by hotels (Tourism Post, 2021).

7. Travels Have Become More Enjoyable- One of the biggest contributions of technology to the tourism sector is services such as movies, games, e-books, etc. offered on planes, buses or trains.

These activities, which make journeys more advanced and comfortable, are usually provided by a screen located on the back of the seat in front of the passenger (Tourism Post, 2021).

8. Robots, chatbots and automation - Many hotels started using robot assistants to manage certain responsibilities at the front desk, serving food and beverages to visitors or answering their questions about the weather outside or the nearest restaurant to go to in the evening.

Connie is a good example of the robot concierge in one of the Hilton Hotel chains. This kind of novelty application, however, is far from the only one. Customers now can make a reservation for their accommodation with the help of internet chatbots, which can manage queries and support guests with the helpful information in case human operators are unavailable (Javelosa, 2016). Especially with industry 4.0 and artificial intelligence, robot technology has gained a new dimension. Although it is labor-intensive, the tourism industry also takes an important share from these technological formations. There are many examples of robot technology in the tourism industry and the current findings indicate that the use of robot technology in the tourism industry will increase in the future (Ibis, 2019).

9. Personalisation - Many people are already familiar with the advertisements that appear on social media and different websites. They are usually related to things that a person searched for or purchased before.

This is one of the common examples of personalisation. In general, the personalization process is similar to marketing methods and can refer to each aspect of the visitors' experiences. Nowadays, clients lack experiences that exactly meet their individual needs and wants. The better client's experience is, the more likely this guest is to return and to use the same service again (Goh, 2009).

10. Artificial intelligence - Artificial intelligence is becoming increasingly relevant to the tourism industry.

AI assists people in personalising their experience of discovering and reserving tours and trips. It is also very helpful to use in the smart hotel rooms, recognising the possible wants of customers, creating a suitable atmosphere including services to meet the guest's demands. Artificial intelligence assists both clients and service providers in almost every aspect of their travel experiences and operations, from customer service to security. In the future, AI may create new tourism trends that might involve self-driving transports, virtual guides and high-level robots (Goh, 2009).

11. Augmented reality (AR) - While Virtual Reality only reproduces whole conditions and experiences, augmented reality connects real-world experiences and virtual components. A well-known example could be the known mobile game Pokémon Go, where fantastic creatures appear in real-time and particular places of the player's actual location.

If instead of fantasy beasts, AR mobile applications show visitors information about the area they're exploring, tell about the historical records about constructions and ruins, or show in detail the menus that local restaurants offer, this can change the whole tourism industry and become very beneficial for hospitality companies to represent their products and services (Asher, 2016).

12. Recognition technology- Recognition technology is one of those frequently leading tourism trends that are beginning to shift toward many distinct fields.

One of the common apps of identification technology for a regular tourist is the bank of automatic gates used at some borders. This technology is capable of scanning the information on the traveller's identifying document or ID card and matching it to their face through specially set cameras and facial identification technology. Recognition technology becomes very popular these days with its new voice recognition technology, used to control smart hotel rooms (Revfine.com, 2020a).

13. Internet of things (IoT) - IoT applies to diverse tourism trends. IoT gadgets have a microprocessor and a variety of digital connectivity, enabling them to connect to the internet and managed using it.

IoT devices combine different systems, such as heating and cooling, entertainment, item control, like turning on and off lights, electrical tools and making quick calls. This technology additionally enables

customers to reserve activities (a session in the spa, attending swimming pool, exercising in the gym etc) or inquire about such matters as room service or additional linen via a special application in the hotel room or using smartphones and PCs. (Revfine.com, 2020a)

14. 5G Technology - This new technology guarantees extremely faster loading and downloading speeds, more comprehensive coverage, and better connections.

Despite downloading web content at least 20 times quicker than before, 5G enables people to improve and expand technology that could not be developed with a 4G connection. That signifies that the connection between smart technologies will be more effective and create more possibilities to use the Internet of Things (IoT). Besides, 5G technology will enhance the augmented reality (AR) or 360° video making it more widespread and available to everyone (Revfine.com, 2020b).

15. Customer Experience - The client experience is a fundamental principle of the hospitality industry with modern technologies and innovations that created countless opportunities for tourists, improving the customer experience is vital for tourism companies.

At the end of the day, a guest's experience is what will advance or disrupt one's business. Creating the best experience from the beginning is what can create a loyal customer that promotes your company or the one who gives up on you at the reservation stage. Everything from the hotel's web page design where its

customers book their tours to the last day of their travel requires to be as pleasant as possible (Revfine.com, 2020a).

6. Conclusion

In the nearest future, techno-companies will present the latest technological trends to the world. Robots, Artificial Intelligence, Virtual Reality and other innovations that appeared to be a dream just a decade ago - now is our reality. These innovations will take the cleaning process to the next level, develop self-serving applications, stores and contactless services to attract customers. The hotel industry's experts have predicted that the industry will bounce back to the pre-pandemic level by 2023. The pandemic seems to be the impetus that inspires the hotel management to be more tech-forward. Covid-19 is an opportunity and a great responsibility for us, professionals of the industry and humans, to critically analyze the fields of e-Tourism and Technological trends in Tourism to develop a sustainable tourism model.

As a result, we need to offer an innovative approach that would answer the main research question. This developed research based on the significant theories and value statements evaluation of the fundamentals of the existing works of literature about the more extensive conversations concerning the tourism of the future and the role of IT in it. Although its future is unpredictable, it is our responsibility to examine the threats and opportunities which we can use to build our future by contributing to it today especially in developing countries like North Cyprus. Nevertheless, hopefully this

paper will serve as a fundament to the further study of Innovation Technologies in Developing Sustainable Tourism after the Covid-19 Pandemic.

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CHAPTER 3
THE EFFECTS OF THE COVID 19 EPIDEMIC
PROCESS ON TRANSPORT: EVALUATION OF
TURKEY

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*“According to Darwin’s Origin of Species, it is not the most intellectual of the species that survives; it is not the strongest that survives; but the species that survives is the one that is able best to adapt and adjust to the changing environment in which it finds itself»
(Megginson, 1963).*

INTRODUCTION

The removal of borders between countries with globalization has been the beginning of a new era for the economic and commercial history of the world. In a process where international trade is in an increasing trend day by day, the most important actor is undoubtedly the international transportation modes. Since transportation systems are open to being affected by global developments, they have the potential to affect international trade positively or negatively, while facilitating trade between countries.

In this context, one of the most important factors affecting international trade and global transportation modes in recent years has been the Covid 19 epidemic. With the epidemic, international trade from time to time has come to a standstill in base transportation modes. It was observed that some modes of transportation gained more momentum during the epidemic process.

In this study, foreign trade data were examined according to the modes of transport, taking into account the official statistics of maritime, road, air and rail transport related to Turkey, and how different transport modes changed in the pre-pandemic and post-pandemic processes was examined.

1. TRANSPORTATION MODES

Transport, which can be defined as the physical movement of goods and people between two points, is crucial to the successful functioning of any supply chain, because products are transported as they move along the chain. Each of the five modes of transport (road, sea, air, rail and pipeline) has certain characteristics that give it one or more advantages over other modes of transport. These features are as follows (www.cdn-acikogretim.istanbul.edu.tr):

- Cost (fee for handling a product by the shipper)
- Speed (transition time from start to delivery)
- Reliability (consistency of delivery)
- Talent (different types of items that can be transported)
- Capacity (volume that can be transported at once)
- flexibility (ability to deliver the product to the customer)

1.1. Road Transportation

II. After the World War II, with the development of automobiles and motor vehicles, road transport also developed. The most important advantages of the road transport system are that it allows transportation without door-to-door transfers, there is no need for a terminal, it can be carried out in almost all geographical regions and the transportation networks are very wide. As it is the most used type of transport, it causes many transporters to operate in an environment where they compete fiercely. In addition, restrictions have been imposed on the transportation of high tonnage and bulky loads. Being

easily affected by adverse weather conditions, not being able to cruise above a certain speed due to both road conditions and legal restrictions, the constant increase in fuel prices and its reflection on transportation costs. Among the disadvantages of the system are that it is weak in terms of security, high energy consumption and, accordingly, very high carbon footprint and not being environmentally friendly (www.cdn-acikogretim.istanbul.edu.tr).

1.2. Maritime Transportation

One of the transportation methods that mankind has used since ancient times is sea transportation. Maritime transport, in particular, providing the opportunity to transport very large quantities of industrial raw materials from one place to another at a time, being reliable, not crossing borders, having minimum loss of goods. It is the most preferred mode of transportation in the world because it pollutes the environment the least, the energy consumed per passenger-km and ton-km is the least, other losses are almost absent, and it is cheaper than air, road and railway. Sea transportation, which is very efficient in the process of transporting industrial raw materials, is a transportation method with the least damage during transportation. At the same time, while the damage to the environment is minimal, the low cost keeps the profit high. It is also the most preferred transportation method in the world (www.cdn-acikogretim.istanbul.edu.tr)

1.3. Air Transportation

The first advantage that comes to mind when considering a line of airline transportation is speed. However, air freight is a rather expensive mode of transportation, and the cost of transporting products is considered the primary disadvantage of airfreight service. Many businesses do not want to risk their shipments traveling by air. At the same time, many carriers and vendors may not prefer the airline because the pick-up location is not located at an airport. Because this transportation operation (transport service that is additional to the transportation line) is added to both transportation costs and transit time. Because of its cost, speed, and capacity characteristics, in most cases, air freight can be said to be suitable for high-value, low-volume products that are perishable or require immediate or limited-time delivery. Airfreight rates also preclude bulk cargo, and dimensional weight is used, which takes into account the density of a shipment (the amount of space occupied by actual weight) to determine the billable weight of the shipment (www.cdn-acikogretim.istanbul.edu.tr).

1.4. Rail Transportation

Rail systems, towed and towed vehicles, transfer stations and terminals are infrastructure components in railway transportation; their maintenance-repair is very costly, but the costs vary according to the geographical structure of the land.

Rail systems, towed and towed vehicles, transfer stations and terminals are infrastructure components in railway transportation; their maintenance-repair is very costly, but the costs vary according to the geographical structure of the land. The most important problem in international transportation by rail is that the width of the rails changes from country to country due to geographical changes and therefore transfers have to be made. However, the use of railways also brings disadvantages such as increased costs due to transfers and differences in transit times depending on the delivery region, since the factories do not have connections to the main lines of the railway in door-to-door deliveries. The advantages of railway transportation are; providing cost advantage in the transportation of heavy tonnage loads such as coal, marble, iron and forest products, being sensitive to the environment. It can be listed as being suitable and safe for mass transportation, low probability of accident, long-term fixed price guarantee, superiority of transit in international transportation and fixed voyage times (www.cdn-acikogretim.istanbul.edu.tr).

1.5. Pipeline Transportation

Pipeline transportation is used to transport various liquid products such as oil, natural gas, other petroleum products, chemicals and water. Pipeline transportation with a very high investment cost; compared to other types of transportation, it is safer in the transportation of cargoes such as oil, natural gas and water and meets the investments made in a short time. Although crude oil, oil, natural gas and derivatives have been transported by road by tankers for many

years, the distance of the source or refinery to the distribution points greatly increases the transportation costs. As a result, pipeline transportation, where transportation costs are minimized, has become widespread. Pipeline transportation, which is important in terms of cost reduction in the transportation of liquid and fluid commercial commodities and providing more advantageous opportunities than other transportation modes, has focused heavily on oil and gas transportation (www.cdn-acikogretim.istanbul.edu.tr).

2. EVALUATION OF TURKEY'S TRANSPORTATION MODES DURING COVID 19 EPIDEMIC PROCESS

While COVID-19 affected many areas of life, it also caused unprecedented pressure on companies in the transportation and logistics sector to serve their customers anywhere in the world in the management of the process. With the quarantine process, traditional retail sales operations have not been interrupted significantly, many companies have benefited from transportation / logistics service providers in order to ensure that their products reach the right place at the right time, even if they are not included in their operations.

The transportation and logistics sector, which had one of the most dominant roles in the process, faced many risks with increasing pressure and global economic uncertainties, and the transportation sector was one of the areas most affected by the epidemic. When the global maritime routes of the cargoes carried around the world are

examined, the third important route with the highest cargo flow is the routes passing through the Mediterranean, including Turkey.



Figure 1. Global Sea Trade Rates

Source: <https://www.worldtradia.com/sea-trade-routes/>

Because of the aforementioned importance of Turkey, foreign trade data were examined according to the modes of transport, taking into account the official statistics of maritime, road, air and rail transport related to Turkey, and how different transport modes changed in the pre-pandemic and post-pandemic processes was examined in this study.

First of all, foreign trade data was reviewed according to the types of transportation (TUIK, Aug.2021). The report includes 2020 and 2021 data for maritime, road, air, rail and other (the pipeline includes postal shipments, electrical power transmission and self-propelled vehicles) transportation share until July 2021. Actually transportation rates were influenced down from covid 19 epidemic process. In addition to the

cessation or reduction of production in factories as a result of the implementation of strict isolations (curfews, reduction in the number of employees at the workplace, etc.), the isolation policies implemented led to decreases in consumption. The decrease in production and consumption also caused decreases in transportation supply and demand (<https://tkygm.uab.gov.tr>). In spite of this decrease, it is seen that the highest share belongs maritime transportation considering the foreign trade transportation rates.

FOREIGN TRADE ACCORDING TO THE TYPES OF TRANSPORT

Million USD Date: 10 Aug.2021

Transportation Mode	EXPORT						IMPORT					
	YEAR		January - July		July		YEAR		January - July		July	
	2019	2020	2020	2021	2020	2021	2019	2020	2020	2021	2020	2021
Maritime Transportation	109.114	100.908	53.671	72.167	8.723	9.801	130.429	125.891	69.447	95.022	10.256	14.072
share in general (%)	60,3	59,5	59,7	59,5	58,6	59,7	62,0	57,3	59,5	64,7	57,9	67,9
Road Transportation	54.462	53.128	28.025	37.449	4.900	5.088	37.177	41.883	20.464	27.305	3.247	3.473
share in general (%)	30,1	31,3	31,2	30,9	32,9	31,0	17,7	19,1	17,5	18,6	18,3	16,8
Air Transportation	14.849	12.733	6.884	9.713	1.055	1.223	29.238	39.260	19.974	15.143	3.265	1.825
share in general (%)	8,2	7,5	7,7	8,0	7,1	7,5	13,9	17,9	17,1	10,3	18,4	8,8
Rail Transportation	971	1.288	704	896	119	134	1.448	2.145	1.177	1.726	171	206
share in general (%)	0,5	0,8	0,8	0,7	0,8	0,8	0,7	1,0	1,0	1,2	1,0	1,0
Other *	1.436	1.582	665	1.133	94	167	12.053	10.337	5.607	7.637	778	1.147
share in general (%)	0,8	0,9	0,7	0,9	0,6	1,0	5,7	4,7	4,8	5,2	4,4	5,5
TOTAL	180.833	169.638	89.949	121.358	14.891	16.413	210.345	219.517	116.669	146.834	17.718	20.723

Figure 2: Foreign Trade According to the Types of Transport

Source: <https://data.tuik.gov.tr>

In order to compare the pre-pandemic and post-pandemic process in terms of transportation modes, export data of TUIK as thousand US dollars was evaluated between 2017 and 2021 (Table 1). According to figure 3, the rate of preference for maritime transport has always been high, although there has been a decrease in numbers in terms of exports by mode of transport.

Table 1. Exports by mode of transport, 2017-2021 (general trade system)

(Value: Thousand US \$)						
Year	Total	Sea	Rail	Road	Air	Other
2021 ^(r)	121 324 962	72 096 797	894 059	37 532 640	9 722 863	1 078 604
2020	169 637 755	100 907 927	1 287 765	53 127 588	12 732 561	1 581 914
2019	180 832 722	109 114 264	971 021	54 461 860	14 849 231	1 436 347
2018	177 168 756	108 802 681	753 544	52 222 468	14 127 905	1 262 157
2017	164 494 619	93 378 625	699 915	50 988 408	17 217 240	2 210 432

Source: <https://data.tuik.gov.tr>

Additionally, different from the previous value, import data of TUIK as thousand US dollars was evaluated between 2017 and 2021 in order to compare the pre-pandemic and post-pandemic process in terms of transportation modes. Table 2 also proves that the rate of preference for maritime transport has always been high.

Table 2. Imports by mode of transport, 2017-2021 (general trade system)

(Value: Thousand US \$)						
Year	Total	Sea	Rail	Road	Air	Other
2021 ^(a)	146 802 384	86 124 109	1 726 537	27 302 095	15 128 358	16 521 285
2020	219 516 807	114 838 355	2 144 863	41 883 477	39 260 478	21 389 634
2019	210 345 203	112 967 845	1 447 897	37 177 012	29 238 406	29 514 041
2018	231 152 483	136 737 402	1 299 419	39 129 380	28 756 745	25 229 537
2017	238 715 128	138 596 809	1 294 504	40 374 083	34 439 948	24 009 784
2017	164 494 619	93 378 625	699 915	50 988 408	17 217 240	2 210 432

Source: <https://data.tuik.gov.tr>

CONCLUSIONS

Ports are the points where interaction with abroad is experienced the most, and 85% of the total cargo subject to Turkey's foreign trade is carried through the ports. While activities in many sectors came to a standstill during the pandemic process, the maritime sector continued on its way without slowing down. As the countries closed in on themselves, while both land borders and air borders were closed, the ports continued to operate. In particular, the closure of land and air borders has brought with it more and more needs to be met by sea. The pandemic process has brought maritime transport to the forefront with its critical role in ensuring the continuity of global trade and supply in the crisis phase and the following period.

In addition, the amount of cargo handled at our ports in the first five months of 2020 increased by 3.7% compared to the same period of the

previous year and reached 205 million 122 thousand 881 tons. Compared to the same period of the previous year; Cargo handling for export purposes decreased by 0.5% to 55 million 277 thousand 478 tons, freight handled for import purposes increased by 6.8% to 96 million 187 thousand 260 tons, cargo handled for cabotage increased by 9.2% to 22 million 927 thousand 326 thousand tons. and transit cargo handling decreased by 1.2% to 30 million 730 thousand 817 tons.

Since Turkey is among the countries that use imported inputs from China, which is the starting point of the epidemic, the pandemic process has affected the raw material and product flow of our country and accordingly the freight mobility in our ports. The slowing effect of the pandemic on the world economy continues to affect all countries. Due to the declaration of the COVID-19 virus as a pandemic by the World Health Organization, there has been a decrease in the amount of handling at the ports as a result of the decrease in export and import-based economic activity both in the world and in Turkey.

Although the covid 19 process is a crisis, it offers great opportunities to sectors that adapt quickly. Finally, the effects of the pandemic will decrease day by day or end completely one day, life will not continue as before. Sectors and institutions that have adapted to the New World order will survive this process with less loss. Since maritime is one of these sectors with a high adaptability to change, it is expected to continue to rise both locally and globally.

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CHAPTER 4

**EXPLORING PLANNING STANDARDS TOWARDS
ACCELERATING INCLUSIVE SUSTAINABLE
DEVELOPMENT DURING AND AFTER COVID-19 IN
IBADAN CITY, OYO STATE, NIGERIA**

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1.0 INTRODUCTION

Most of the big African cities, including those in Nigeria, are faced with the problem of rapidly deteriorating physical and living environment. The deterioration manifests itself in the form of slums, urban sprawl and squatter settlements, increasing traffic congestion, flooding and erosion, deteriorating infrastructure and short falls in service delivery among others (Olujimi, 2009). The concern of the global community on the incessant growth of informal settlements in cities of developing world for the past few decades has kept growing. This is because the problems associated with these communities have been contributing significantly to impoverishing city residents and by further extension slowing down efforts to reduce poverty. In most cases, improper management of land has accounted for the existing scenario.

UNEP (2016) and Anderson et al. (2020) establish that Covid-19 and other recent outbreaks including Ebola, Middle East respiratory syndrome, sudden acute respiratory syndrome, and Zika are zoonotic diseases. Smith et al. (2014) and UNEP (2016) establish that the richness of zoonotic diseases is increasing with approximately one new infectious disease appearing in humans every four months. This scenario, therefore, calls for a multilateral action, if we are to turn the challenges into an opportunity towards an inclusive, resilient and green sustainable development pathway. It is noteworthy that every activity takes place in a space and every pandemic/endemic affects human beings that live in a space, therefore, exploring town planning

standards in controlling/combating pandemics/outbreaks is still in line though, to a certain extent not recognised to policy makers as one of the main solutions. COVID-19 impacts have exposed the level of compliance of developers to the town planning standards.

According to Hiraskar and Hiraskar (2010), town planning is considered as art of shaping and guiding the physical growth of the town, creating buildings and environments to meet the various needs such as social, cultural, economic and recreational; and to provide healthy conditions for the rich and poor to live, work, and to play or relax. The objectives of town planning in summary include securing for the people good health and convenience; and making where they are living beautiful (Hiraskar and Hiraskar, 2010). Town planning standards present both the quantity of space needed for a particular activity or land use that results in determining the quality of the use/activity; and measure the ups and downs of planning profession in Nigeria. Town planning standards address land-use changes, deforestation, intensified agriculture and livestock production, habitat destruction and biodiversity loss, rapid urbanisation and population growth, extractive activities, and the wildlife trade. Therefore, town planning standards deal with the management of spaces/lands in the rural and urban areas to secure good health, convenience and beauty. However, the potential of town planning standards to accelerate inclusive sustainable development during and after covid-19 and meet the promise of the 2030 Agenda for Sustainable Development has not been fully explored in Ibadan of Oyo state as well as other African

cities. Inclusive sustainable development calls for special attention to the improvement of physical planning outcomes in which density control, zoning regulations, occupancy ratio, airspace and setback regulations occupy pertinent positions.

Cities and other urban settlements in Nigeria are at the risk of COVID-19. Many densely populated areas where town planning standards are contravened have experienced high pandemic/epidemic case numbers and deaths, because they are the breeding ground for disease outbreaks. Given the high population density, the risk of spread of infectious diseases is often elevated, especially in congested areas, and their people often rely on extensive and crowded public transportation networks to get from one place to another (WHO, 2020). There are also communities with crowded and substandard housing, have shared toileting facilities, lack access to safe water, sanitation and hygiene facilities. In addition, word-of-mouth source of information is common in the cities, leading to many to say “there is no COVID-19” or “COVID-19 is just a scam” which compounds this problem. To cap it all, the presence of pressing health vulnerabilities and social disparities in the African cities make building resilience in an inclusive manner a difficult task.

This paper aims at supporting the town planning officers, community leaders and policy-makers in cities and other urban settlements in identifying effective approaches in implementing town planning standards that enhance the prevention, preparedness and readiness for COVID-19 and similar events in urban settings, and that ensure a

robust response and eventual recovery now and in the future. To achieve this, it is imperative to: 1. Examine density and zoning control measures in Ibadan and development pattern; 2. Assess the level of developers' compliance to these town planning standards and COVID-19 prevention guides in Ibadan; and 3. Assess the impact of town planning standards in combating or/and controlling a potential increase in disease outbreaks and pandemics such as COVID-19; and 4. Investigate the challenges facing town planning standards in combating/controlling the spread of pandemics and epidemics.

2.0 CONCEPTUAL UNDERPINNINGS

2.1 Concept of Life and Death

This concept takes its source from the inscription on every medicine that says, "Use only as directed by the physician". It relies on the philosophy of "whatever can sustain a life can as well kill". The interpretation of this inscription on every medicine is that medicine that sustains/heals if not prescribed by a physician (self-medication) or the dosage prescription is not followed, could lead to overdose, underdose or negative body reaction. Therefore, instead of healing, such a drug could lead to death, body deformation or depression of the patient. In summary, a medicine kills when the prescription on dosage is not followed or a physician was not consulted on the dosage of the medicine. The implication of this is that life and death are in a solution to any problem. The choice is left to the patient.

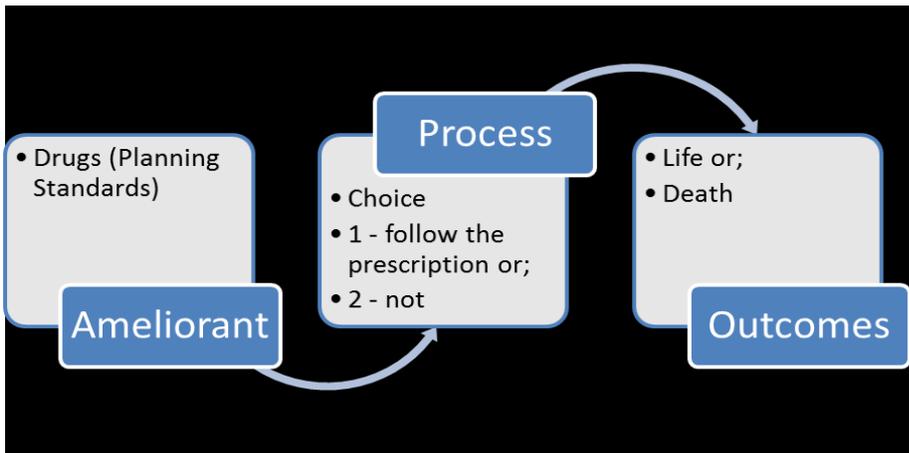
This concept has the following assumptions:

- c. Every problem or illness has a name;
- ci. There is a physician or professional somewhere that identifies the nature of the illness and prescribes both the cure and dosage;
- cii. There is always a consequence/s for overdosing, under-dosing or not following the stipulated timing of the drugs/ treatment on a patient.

In relation to town planning standards, the objectives of town planning standards include to: provide standards of excellence that help encourage the improvement of any user/settlement; assist prospective developers in identifying quality infrastructure and enabling environment for their developments; facilitate the siting of activities at deserved places; establish criteria for the certification of a development; provide public accountability for a development/proposal quality; and determine the eligibility of a permit to receive approval. In summary, town planning standards are formulated to control messy environmental situations that could affect lives and environment negatively. If they are strictly adhered to, could cushion the effect of environmental problem on public or divert it to other area where the effect shall not be well felt. Figure 1 presents a model that shows the interaction or relationship that leads to life or death. Drug represents an action or solution such as planning standards offered to ameliorate a physical/environmental problem by professionals. The process of making a choice in the course of finding a solution to the problem/illness is referred to as planning process. The

choice is between following the physician prescription and not following it. This takes place during the process stage and determines what the outcome shall be (life or death). It should be noted that many times one needs to enforce the drugs on patients, so are the town planning standards.

Figure 1: Model Showing Interaction or Relationship that leads to Life or Death



Source: Author's Expression, 2020

This model is relevant to this study in the sense that town planning standards (the drugs) are formulated by the town planning authorities to control and or combat disease outbreaks and pandemics but city administrators disregard them. One of the outcomes is what the world is suffering from (COVID-19 pandemic). Lives are saved in a planned environment (an environment or a city that complies with the town planning standards).

2.2 Inclusive Sustainable Development

Analysing the Sustainable Development Goals, the word “inclusive” reflects in Goals 4, 8, 9, 11 and 16 (5 out of 17). In addition, it is used in five of the targets, and 22 times in other parts of the 2030 Agenda. An adage in Yoruba says “if a blacksmith is hitting a rod at the same spot, he is trying to bring something tangible or reasonable out of it”. The analyses point to the importance of inclusiveness in achieving sustainable development Goals. Some questions have to be answered if justice is to be done to inclusiveness. These include: 1. Who are those to be included? 2. From what are they excluded? 3. Why are they left out? 4. What methods and mechanisms exist to reach and include them? (This question talks about “How” i.e. the process involved in including them). 5. What policy would be appropriate to include all? and 6. When should they be included? Conceptually, inclusiveness (social, economic, political and cultural) focuses on the principle of non-discrimination or refers to the need to include everyone in societal processes, and conveys the notion that people should not only be allowed to thrive, but have a voice and effective opportunities to shape the course of every development within their jurisdictions or communities.

Inclusive development is multi-dimensional and interconnected to one another, but not mutually exclusive. Therefore, the definition depends on who is defining it and the task at hand. According to Arts (2017), scholars focus on a human rights perspective of the inclusive development, some on the political (Hickey, 2013) and some on the

ecological dimension (Gupta and Vegelin, 2016). An international development perspective views inclusive development as a reiterative scrutinising of who is included in and who is excluded from the improvement of human well-being and society at large (Gupta, Pouw and Ros-Tonenb, 2015). Gupta et al. (2015) express that inclusive development also answers the following questions: On what grounds do the citizens excluded? and how can inequality between the poor and rich in society can be reduced? Johnson and Anderson (2012) establish that inclusive development is a process of structural change which gives voice and power to the concerns and the excluded groups. These authors expatiate that inclusive development redistributes the incomes generated in both the formal and informal sectors in favour of these groups and allows them to shape the future of society in interaction with other stakeholder groups. In the same vein, Hickey, Sen and Bukenya (2015) opine that inclusive development is a process that occurs when social and material benefits are equitably distributed across divides within societies, income groups, genders, ethnicities, regions, and religious groups. Gupta et al. (2015) argue that inclusive development is a development that includes marginalised people, sectors and countries in social, political and economic processes in increasing human well-being, social and environmental sustainability, and empowerment. Inclusive development can be viewed as an improvement in the distribution of well-being along the dimensions beyond growth, as at the same time, average improvement in achievements is realised (Musahara, 2016). From the foregoing, inclusive development can therefore be best determined by including

various dimensions such as equity in distribution of economic and material benefits (including infrastructure) as well as the political and environmental.

The popular and most accepted definition given to sustainable development by WCED (1987) is development that meets the needs of the present without compromising the ability of future generations to meet their own needs. This definition calls on all actors in societies worldwide to contribute to sustainability. It is noteworthy that without inclusive and transformative development, the Africa continent's long term sustainability and socio-economic development may be at risk. Johnson and Anderson (2012) aver that the role of inclusiveness is important in achieving sustainable development because growth and development are not evenly distributed across sectors and regions. Inclusion promotes transparency, accountability and enhances development cooperation outcomes through collaboration among the civil society, governments and private sector actors (Musahara, 2016). Inclusive sustainable development expands to include human rights, participation and non-discrimination and accountability (OXFAM, 2014). Socially inclusive societies are safer, more stable, and meet the essential conditions for economic transformation and growth, high levels of productive employment and social cohesion now and in the future (Abbott et al., 2016). These are very important to guaranteeing sustainable development.

The argument now is how can town planning standards achieve or accelerate inclusive sustainable development during and after covid-

19 in Ibadan city of Oyo state, Nigeria. It is worthy to understand that town planning aims at achieving an effective spatial distribution and disposition of different competing land uses and structures based on sound principles of urban design, orderliness, balance (equity), aestheticism, functionality, consistency, harmony and economy.

3.0 MATERIALS AND METHODS

3.1 The Study Area

Ibadan is located in south-western Nigeria, about 128 km inland northeast of Lagos and 530 km southwest of Abuja, the federal capital. The city is a prominent transit point between the coastal region and the areas to the north (Owolabi, 2018). Ibadan had been the centre of administration of the old Western Region since the days of the British colonial rule, and parts of the city's ancient protective walls still stand to this day (Fourchard, 2003). The principal inhabitants of the city are the Yorubas. Table 1 presents the Ibadan region population figures for 1991 and 2006 later projected to 2018. The 2006 population figure placed the region the third most populous city in the country. The peri-urban LGAs include Egbeda, Akinyele, Oluyole, Ona-Ara, Ido and Lagelu while the urban LGAs are Ibadan North, Ibadan North East, Ibadan North West, Ibadan South East and Ibadan South West (Figure 2). Ibadan is a forest site with several ranges of hills, varying in elevation from 160 to 275 metres, offered strategic defense opportunities (Fourchard, 2003). According to Olaniran (1998), the location of the city at the fringe of the forest promoted its emergence as a marketing centre for traders and goods

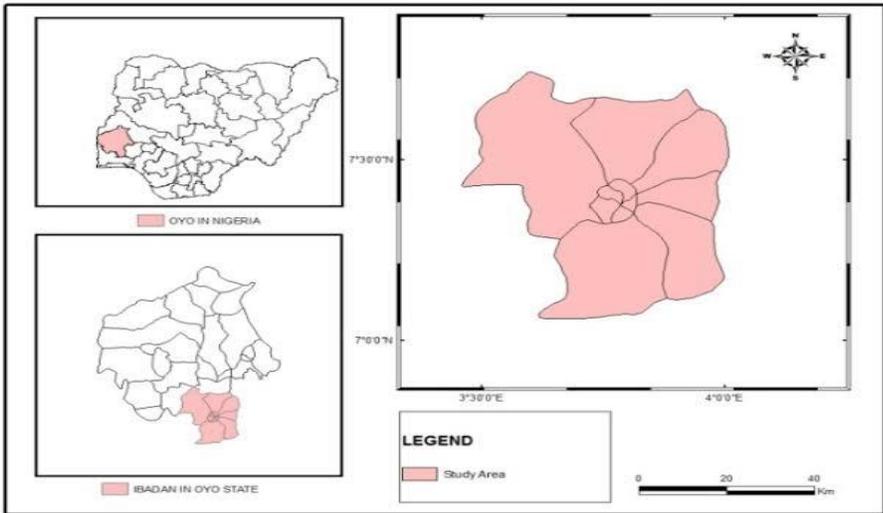
from both the forest and grassland areas. This, high increase in population of the city and non-compliance to planning standards might contribute to the emergence and spread of zoonotic diseases like Lassa fever, Zika and Covid-19 in the city.

Table 1: The Population of Ibadan by Local Government Areas

S/No.	Local Government Area	1991 Population	2006 Population	2018 Projected Population
1	Akinyele	140,118	211,359	546,460
2	Egbeda	129,461	281,573	504,898
3	Ido	53,582	103,261	208,970
4	Lagelu	68,901	147,957	268,714
5	Ona-Ara	123,048	202,725	479,887
6	Oluyole	91,527	265,059	356,955
7	Ibadan North	302,271	306,795	1,178,857
8	Ibadan North East	275,627	330,399	1,074,945
9	Ibadan North West	147,918	152,834	576,880
10	Ibadan South East	225,800	266,046	880,620
11	Ibadan South West	227,047	282,585	885,483
	Total	1,785,300	2,550,593	6,962,669

Source: National Population Commission Census Figures for 1991 and 2006.

Figure 2: Ibadan Region Within the Context of Nigeria and Oyo State



Source: Adapted from Eguaroje et al., 2015.

The spatial expansion of Ibadan began to be significantly noticed in the late 1820s stemming greatly from the military exploit of the city (as a refugee camp) and also serving some political and economic purposes (Fourchard, 2003). The extension of rail line to the city from Lagos in 1893 and establishment of branches of European firms in 1918 largely influenced the influx of people to Ibadan from different parts of the country. Areola (1994) and Oladosu (2013) establish that around 1952, the city had about 103.8km² out of which 36.2km² constituted the built up (34.87%), thus placing Ibadan as the largest city in the sub-Saharan Africa until 1970 (Lloyd, 1967). The land area increased from 136 km² in 1981 to 210-240 km² in 1988-89 (Areola, 1994). By the year 2012, the total percentage land use on settlement is 72.5%, vegetal cover 26.2% and water body 1.4% respectively (Oladosu, 2013). Carruthers and Ulfarsson (2003) in Oladosu (2013)

reveals excessive land consumption due to under-valuation of open space, congestion due to increased commuting, and socio-economic segregation due to exclusionary housing markets as major problems in Ibadan. The identified problems can be traced to the state of planlessness of the city. It can be painful and irritating to hear that Ibadan city in Nigeria has not witnessed any formal planning up to present day (Oladosu, 2013). The consequences are outbreak and rapid spread of diseases such as COVID-19.

3.2 Method

Data for this study were sourced through primary and secondary means but more of secondary. Primary data were collected from the Oyo State Ministry of Lands, Housing and Urban Development and the Directors or any Senior Staff in the 11 Town Planning Zonal Offices in Ibadan region on town planning space standards, compliance and enforcement. In addition, 500 residents were interviewed on whether they were tested for COVID-19 or not, their COVID-19 status and their places of living. Primary data from the residents were collected through telephone calls. Telephoning was employed to make every data and information given to the researcher confidential. Interview guide was use to collect information from the town planning officers in the Ministry and LGAs. The study covers the 11 LGAs that constitute Ibadan city which include Egbeda, Akinyele, Ido, Lagelu, Ona-Ara and Oluyole for the peri-urban LGAs, and Ibadan North, Ibadan North East, Ibadan North West, Ibadan South East and Ibadan South West for the urban LGAs. The secondary

data were sourced from journal articles, textbooks, town planning and health offices documents.

4.0 FINDINGS AND DISCUSSION

4.1 Density and Zoning Control Measures in Ibadan and Development Pattern

Table 2 shows the statutory setbacks for residential building development on private land outside GRA adopted by all the town planning zonal offices in each local government of Oyo State. According to the Town Planning Officers interviewed, no residential development is allowed without compliance with the stipulation of the setbacks except those that did not submit their development for approval. Observation by the researcher revealed that most of the existing residential buildings (high density) in the six peri-urban LGAs of Ibadan are built on 15m x 30m plot as against the minimum 18m x 30m standard. Similarly, most developers observed less than 1.8m minimum left, right and rear setbacks and the 4.5m minimum frontage required to be observed from the property lines. Invariably, the maximum plot coverage for most buildings' development is grossly contravened, thus compelling formation of clustered settlement. This implies two things: some developers might not obtain necessary development permit before embarking on development or the development control is compromised thus allowing for arbitrary standard used by the developers. The response of the interviewed Town Planning Officers indicates that, the towns planning zonal offices do not have any specific standard with regards to permissible

building height and restriction of the type of use. This explains the predominance of residential buildings on Ibadan outskirts and irregular height of buildings (not following any particular pattern). The worse is the case of the urban LGAs (traditional LGAs) as most of the residential buildings did not meet any of these town planning requirements (see Plate 1)

Plate 1: Slummy Condition of the Ibadan Urban LGAs



Source: Adapted from Owolabi, 2018

Table 2: Plot Area, Plot Coverage and Set-backs for Residential Development on Private Land, (outside GRA)

S/N	Plot Densities	Plot Size and Area	Plot Size and Area M ²	Maximum Plot coverage in percentage	Minimum set-back from property line in meter (m)	Front	Rear	Left side	Right Side	Space between buildings
1.	Low Density	30.00x36.00	1080.00	35	6.0	3.0	4.5	4.5	4.5	2
2.	Medium Density	24.38x30.00	720.00	40	6.0	3.0	3.0	3.0	3.0	
3.	High Density	18.00x30.00	540.00	45	4.5	1.8	1.8	1.8	3.0	

Note: For every additional floor, a minimum of 1.5m air space shall be added.

Source: Oyo State Government, 2011.

In addition, Ibadan with a total land area of about 3,080 km² has an average density of 828/km² (<https://en.m.wikipedia.org/wiki/Ibadan>). Oyo State Valuation Office (2008) emphasises that the city is predominantly a residential town. The housing stock ranges from single family homes, Brazilian building type to flats. Major commercial development is along main arterial with a couple of shops

housed by some residential buildings (mixed use). In other words, there are no discernable spaces exclusively devoted to commercial and industrial uses as well as organised open space. The consequences of the foregoing are outbreaks and rapid spread of pandemics and epidemics.

4.2 Level of Developers' Compliance to the Town Planning Standards and COVID-19 Cases in Ibadan

Table 3 revealed that 54% of the developers in the Ibadan urban LGAs did not comply with the town planning standards before embarking on construction of their houses. Majority (65.1%) of the respondents in the peri-urban LGAs of Ibadan complied with most of the town planning standards. This may be attributed to the size of these LGAs and their population. The implication of this is that density regulation that states how many people a plot of land should accommodate and the number of person to inhabit a room/house were not followed; what should be where regulation was disregarded; setback (concerned with the distance between a building and the abutting road/s, power line, or any other building properties that are remarkable encumbrances) and airspace (appropriate distance between buildings on the same site which will facilitate cross ventilation and proper ventilation) regulations; and floor area ratio that is calculated as built up area divided by the land area. The consequence of these is congestion or and slum creation and because covid-19 is regarded as a zoonotic disease, in this type of development animals will not be restricted, the

two consequences lead to outbreak of diseases and rapid spread of pandemics/epidemics.

Table 3: Town Planning Standards' Level of Compliance

Variable	Ibadan Urban LGAs	Ibadan LGAs	Peri-Urban
Compliance	46.0%	65.1%	
Non-Compliance	54.0%	34.9%	
Total	100.0%	100.0%	

Source: Field Returns, 2020

Table 4 reveals the percentage of those that went for the COVID-19 test among the respondents. With this, 70.2% of the respondents submitted that they were tested and 29.8% did not go for the test. According to them, their reason for not going for the test was the fear of being declared that they were positive to the pandemic and became isolated at an unknown place where no relative will be allowed to visit them. Table 4 also presents that large number (210) of those that were tested for COVID-19 (351) was positive and 141 of 351 were tested negative to COVID-19. This implies that large number of the tested respondents was affected by the pandemic. It was revealed through conversations that many did not want other people to know their status and had been isolated. Many told their relatives they just travelled outside the city. This made using telephone conversation to collect data from them most appropriate. Lastly, Table 4 revealed that 65.2% of those that were tested positive to COVID-19 (210) were residents of the Ibadan urban LGAs and 34.8% came from the Ibadan peri-

urban LGAs. This can be attributed to the fact that residents of these peri-urban LGAs enjoyed healthy living condition emanating from adequate building setbacks, not located their buildings on disaster prone areas and different forms of environmental pollution (open sewer, indiscriminate dumping of refuse), presence of basic services essential to sustained healthy environment like sanitation facilities, safe source of water supply, electricity supply, and so on are grossly adequate in the community. On the other hand, findings revealed that in the Ibadan urban LGAs, houses in the slums were located in squalid environment, derelict and characterised by poor sanitary condition, lacking basic social infrastructure. These were signs that these LGAs were liable outbreak of diseases and pandemic/epidemic.

Table 4: COVID-19 Status and Place of Residence

Variable	Frequency	Percentage
Have you been tested for COVID-19?		
Yes	351	70.2
No	149	29.8
Total	500	100.0
If Yes, please, what was your status?		
	210	59.8
Positive	141	40.2
Negative	351	100.0
Total		
If Yes, where are you living?		
Ibadan Urban LGAs	137	65.2
Ibadan Peri-Urban LGAs	73	34.8
Total	210	100.0

Source: Field Returns, 2020

4.3 Town planning standards in combating/controlling a potential increase in disease outbreaks and pandemics such as COVID-19

Interview conducted with the Town Planning Officers in the Ministry of Lands, Housing and Urban Development and senior Officers in each of the 11 LGAs that constitute Ibadan revealed that town planning standards can go a long way combat and control outbreak of diseases, pandemics and epidemics. According to the respondents, to appreciate these, one needs to know what non-compliance with planning standards can cause in cities like Ibadan. These, as listed by them include: generally low quality of urban living; unsightliness in the appearance of cities; urban sprawl; greater menace of the motor traffic; socio-political and physical discomfort; haphazard chaotic and uncontrolled physical developments and uncontrollable growth of suburbs; uneven and indiscriminate distribution of economic and industrial activities in the cities; congestion and pollution; environmental degradation; and insecurity and inconveniences. They submitted that if all these can be secured in Ibadan city, they will play important roles in combating disease outbreaks and pandemics such as COVID-19 now and in the future. According to them “the environment one lives contributes to his/her health status but government only focuses on medical ways of controlling/combating pandemics and disease outbreaks”

4.4 The challenges facing the Town Planning Standards in Combating/Controlling Pandemics and Epidemics in Ibadan

Officers interviewed in the Ministry of Lands, Housing and Urban Development and senior Officers in each of the 11 LGAs identified the following as the major challenges facing the town planning standards in controlling/combating pandemics and disease outbreaks in Ibadan:

1. Lack of updated base maps for Ibadan city. The one prepared for the city is only full of lapses and now outdated. The implication of this is that the city has no master (development) plan. Without a master plan and a structure plan, it is not possible to guide the rate and direction of growth of any settlement. There will be abuse, misuse and uneconomic use of scarce resources including land and money.
2. There is acute shortage of man power in the town planning offices to be able to carry out proper development control within the city. This situation and non-availability of working tools such motorcycles and caterpillars do not augur well for the enforcement of town planning standards in the city.
3. Political interference is another major planning challenge mentioned by these officers. Planning Officers were not given the free hand to operate which led to the unwholesome conversion of service plots and open spaces within the city to residential thereby creating slums that breed or and spread epidemics and pandemics.

4. Inadequate fund is hampering effective town planning standards. Allocation is not only small but requires some sweat to get it out. Enough funds is required to take care of the needs of the offices; training and re-training of members of staff to enable them keep abreast of modern town planning principles and techniques that present town planning standards as means of controlling pandemics and epidemics.
5. Lack of public awareness was mentioned as another challenge. The State Government has not being doing anything to enlighten members of the public on the benefits of town planning standards as means of controlling pandemics and disease outbreaks. The common man will continue to see town planning standards as an anti-social practice unless there is regular public debate, seminar, district/community meeting and exhibition.

5.0 CONCLUSION AND RECOMMENDATIONS

5.1 Conclusion

The COVID-19 and other pandemics/epidemics had caused untold disruption of lives and economies most especially in Ibadan city. Observations revealed that governments only focuses on medical solutions to the various pandemics mostly COVID-19 leaving behind the fact that planning ones environment goes a long way control and combat them. Having confirmed from findings that those LGAs in Ibadan that complied with the town planning standards had less cases of COVID-19 from the inception in February 2020 to August 11th 2020, it is therefore established that compliance with the town

planning standards be considered as means of combating or controlling pandemics in Ibadan and the world at large. This can only be achieved if the recommendations proffered are adhered to.

5.2 Recommendations

Any efforts to improve the state of public compliance with town planning standards in Ibadan will be meaningless in the absence of:

1. A regional development plan, master plan and structure plan for each settlement and layout plans prepared by professional town planners with the inclusion of every stakeholder irrespective of their social status.
2. Adequate professional and technical staff; and there should be provision of necessary equipment including vehicles for the planning offices. This will help in monitoring every development within their jurisdictions and enforce town planning standards on developers that want to contravene.
3. Ibadan public enlightenment committee consisting of representatives of every resident on physical planning should be launched without delay.
4. Zoning of what should be where should be put in place without any bias for any set of people and every stakeholder's life styles should be considered in drafting the zoning. This will restrict animals from going into residential areas, control pollution and congestion of all kinds thereby creating a disease outbreaks and pandemic free city.

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CHAPTER 5

ANALYSIS OF THE VIEW POINTS OF THE PUBLIC ABOUT HOW SUCCESSFULLY THE FIRST WAVE (MARCH-JUNE 2020) OF THE COVID-19 PANDEMIC PERIOD WAS MANAGED IN EU AND TURKEY ACCORDING TO THE SOCIO-DEMOGRAPHIC VARIABLES: EXAMPLE OF THE CITY OF SIVAS PUBLIC, TURKEY

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INTRODUCTION

COVID-19 Pandemic is a global epidemic which has taken hold of the whole world within a short period of time. The whole world is struggling with the economic, sociological and in particular health problems the pandemic has caused. “The global COVID-19 crisis is unprecedented, just as it was unexpected. It is the biggest social, political, and economic challenge the world has faced since the end of the Second World War” (Bufacchi, 2020: 2). The fight against these problems has reached such a serious level that studies on COVID-19 Pandemic have come to the fore in the literature.

One of the most important aspects which has determined the progress of the pandemic has been how the world countries handled it. While some countries reacted faster and took powerful precautions, other countries were quite late in taking precautions. Governments have been struggling to keep their economies afloat while protecting the lives of their citizens. Governments have taken a series of precautions to prevent the epidemic after the initial cases were reported. The borders were closed, flights were cancelled, as much opportunity as possible was given remote working, schools were closed, public activities were banned, individuals' freedom of movement was limited and there were lockdowns. The success of governments in the fight against COVID-19 Pandemic depended on the low rates of mortality and smaller shrinkage in their economies.

Global success was not achieved in the fight against the pandemic. The epidemic was more successful and stable in the path towards

becoming a pandemic despite the fact that attempts have been made on a national scale. COVID-19 requires a global development paradigm instead of an international development paradigm (Oldekop et al., 2020:3). COVID-19 crisis necessitated significant international cooperation to decrease its scope and effects. Unfortunately, a global crisis which required coordination and cooperation was characterized with separation and disagreement” (Pevehouse, 2020:191). “We need international collaboration to establish globally accepted guidelines to ensure equitable distribution that considers epidemiological and medical factors” (Guimón and Narula, 2020:40). “Control of a contagious disease like COVID-19 can only be efficiently achieved through international cooperation” (Brown and Susskind, 2020:64).

During this process where international cooperation could not be achieved, we have witnessed that countries and governments followed a populist discourse politics and have nationalistic reactions in the fight against the hardships of COVID-19 Pandemic. Countries acted in a partial and nationalistic manner since the life and basic interests of the citizens were at stake. “Individuals and all countries started acting very selfishly” (Vogel, 2020:2). This attitude reminds one of a saying in Turkey: “Each man for himself.” Perhaps this environment where international cooperation is not achieved required this or the attitude of the countries prevented cooperation.

The inconsistent efforts and populist feelings in the international arena prevent cooperation (Oldekop et al., 2020:3). “Relationship between COVID-19 and racism arises via the effect on rising nationalism and

populism, and their effects on race relations during a pandemic outbreak” (Elias et al., 2021: 786). Historically the first half of the twentieth century was a period of rising nationalism. When the bubonic plague erupted, anti-immigrant feelings increased in numerous countries (Elias et al., 2021: 786). As Stephen M. Walt expressed as well, “The pandemic will strengthen the state and reinforce nationalism” (Allen et al. 2020). Bieber stated that the rise of exclusionist nationalism carries the risk of consolidating preexisting nationalist dynamic even if it is not the inevitable result of the pandemic (2020:1). From this point of view, in particular the nationalistic government have functionalized nationalistic imitation with the COVID-19 precautions (Givens & Mistur, 2021: 214).

Economic insecurity and the changes in the loss of trust and cultural attitude are all important channels which influence populism. A potential effect of a large scale crisis such as COVID-19 can be more disappointment, more nationalism and protectionism and increasing cultural polarity – these all create a productive ground for populism” (Morelli, 2020). Katsambekis and Stavrakakis have prepared a report which created a short but meticulous comparative map of populist politics in the context of the pandemic (2020). In addition, Givens and Mistur have published a study in which they analyzed the reactions of nationalist leaders to the pandemic over the media (2021).

It is possible to list the 12 basic suggestions of Formana et al. who have underlined the erroneous attitude of countries in the first wave of the pandemic in terms of decreasing the economic and social costs of

the pandemic and the reactions to be given to future crises as follows (2020: 577-579):

1. Transparency is vital
2. Successful responses hinge on decisive leadership
3. We need unified responses to pandemics rather than diversified strategies.
4. Effective communication must occur at the highest political levels
5. The European Union, and other regional blocs, must assume a greater health role
6. Global solidarity is the only way to win the war against COVID-19
7. The WHO has done a lot given the resources it has, but there is much room for improvement. It must now focus its activities, expand its remit and enhance its operational capacity
8. Existing global insurance institutions and policies are inadequate, and these require significant changes and improvements
9. Efforts to develop COVID-19 vaccines and treatments are commendable, but there is still much more to do
10. We need to test the responsiveness and resilience of health systems and make changes and improvements based on the results
11. Accountability is critical for building trust and for sound, inclusive decision making

12. There are opportunities to introduce novel approaches, such as using robots and artificial intelligence (AI), in this – and in future – pandemic response.

These suggestions have been prepared taking the negative experiences of this process as the starting point. If these suggestions are taken as criteria, each country can see the grade it received in the first wave. The most important aspect of these suggestions is that they will guide the next possible crises.

The purpose of this article is to present the view points of the Sivas public in Turkey on how the first wave of the pandemic has been managed in the EU and Turkey in terms of socio-demographic variables. In this respect, it will be important in terms of the study topic to present how the EU and Turkish governments managed the process in the first wave of COVID-19 Pandemic in March-June, 2021.

REACTION OF EU TO THE FIRST WAVE OF COVID-19 PANDEMIC (MARCH-JUNE 2020)

COVID-19 started spreading speedily and aggressively in Europe after it was verified in Italy for the time towards the end of January in 2020. The slow initial reaction given by the European countries to the epidemic caused the continent to become the hot spot of COVID-19. Since the number of reported new cases exceeded the number of cases in China and doubled in a few days, World Health Organization (WHO) classified Europe as the new “epicenter” of COVID-19 Pandemic. According to the data collected by European Disease

Prevention and Control Center (ECDC), 1.578.229 Coronavirus cases were reported in EU countries and Europe as of 11 July, 2020 (about 15% of all cases throughout the world). In the UK, 179,168 deaths constituted about 35% of all deaths in the whole EU. Although the number of cases reported and death rates in European countries differed, COVID-19 Pandemic has created an unprecedented threat for the European Union and all EU countries (Wang, 2021:24).

The first reactions and the speedy increase in the number of cases where the precautions were “lighter” (Italy, France, UK) left the health system in danger of collapsing. “In the beginning of the Coronavirus pandemic and in particular in the months of March-April where the cases increased, it is noteworthy that countries which did not take precautions about the limiting of socio-economic life were Belgium, France, Italy, Holland, Sweden, Spain, Finland, UK and USA which are economically very developed countries. The frequency index value² which was about an average of 68 for all OECD countries remained on an average of 49 for these countries” (Koç and Saraç, 2020:9).

It can be stated that EU’s attitude which was far from taking steps or the benefit of the whole in the first wave of COVID-19 and the beginning of the crisis, led to the emphasis of national interests and rise in nationalism. This was against team spirit and discourse. “Since the outbreak of the Covid-pandemic on the European continent in February 2020 inter-European relations have considerably degraded.

² Reflects the importance of the frequency index with shows the timing and degree of precautions taken by OECD countries on the Coronavirus pandemic.

The pandemic affected the European community not only on a material but also, and more importantly, on a social level. Accusations have been made by certain governments and analysts that the European Union's crisis management had been inadequate, lacking solidarity" (Loewer and Mioni, 2020).

"In general, all member states were initially inward-looking in their reactions; they unilaterally closed borders and focused on crisis management at home. European solidarity has largely been absent." (Russack and Blockmans, 2020:1) This has caused tension between EU countries. Italy was one of the first countries strongly affected from the pandemic. Italy criticized EU solidarity and support and claimed that Europe "abandoned" them to their fate. In March, The US Ambassador to Italy stated that "the coronavirus crisis tested the integrity of EU and its reliability" (Loewer and Mioni, 2020). In the following months, Spain, France and UK suffered greatly, but did not react to EU as much as Italy. Italy's reaction is based on a decade of political and financial crises, belt-tightening and accurate or erroneous information given to the Italian public and being increasingly associated with EU. COVID-19 crisis has ignited the situation. However, "President of the European Commission Ursula von der Leyen extended a 'heartfelt apology' to Italy on behalf of Europe, admitting that it had not been by its side since the beginning of the crisis" (Gill, 2020).

THE CRISIS OF NATIONALISM BROUGHT BY COVID-19

“The Covid19 crisis has shown how difficult European cooperation can be, especially in policy areas where the EU has only a legal competence to support member states” (Russack, 2020:1) Nationalistic attitudes gained power in such an environment. Colijn, a senior research fellow at Clingendael, the Netherlands Institute of International Relations used the term Coronationalism for the first time to define renewed nationalism produced by the coronavirus crisis (Özkırımlı, 2020). “Neo-nationalism generally appears as a reactionist approach in times of crisis. This formula has been observed in Europe in the recent decades in cases such as financial crises, Euro region debt crisis and refugee crisis. This year, the rising symptoms of nationalism accompanied the Coronavirus Pandemic(Wang, 2021:33). Nationalism started rising as a result of unpreparedness of EU for the pandemic in the first wave and the inability to manage the crisis. When the coronavirus started to spread rapidly in Europe, individual European nation states unilaterally closed their borders, hoarded critical medical supplies, and played blame games. (Wang, 2021:20) In fact, “COVID-19 strengthened the nation state” (Woods et al., 2020: 822). The mask wars damaged EU’s image of solidarity. “The crisis has moved one step further, after a truck filled with medical supplies was stopped at the German-Swiss border, after German chancellor Angela Merkel allegedly banned most exports of protective medical equipment. A diplomatic spat between Germany and its neighbors Austria and Switzerland ensued.” (Vogel, 2020:2).

Wang underlined the three types of nationalism which emerged during the first wave of the pandemic (2021:25-33):

- 1. Medical Nationalism:** As the global pandemic spread, there was an immense demand for medical equipment which fought against the pandemic and saved lives. As a reaction to the rising public health crisis, all of a sudden numerous European countries started running after nationalistic policies. They have adopted the “my country first” approach by competing with each other for basic health products and protective equipment instead of working together in a coordinated manner. Thus, neo-nationalism which had devastated the European continent before the pandemic began turned into a “medical nationalism” wave in the first months of COVID-19 pandemic.
- 2. Economic Nationalism:** The quarantine policies implemented to prevent the spread of COVID-19 virus challenged the world economy in an unprecedented manner. During the initial days of the crisis, the apparent lack of solidarity between the EU member countries brought the European single market to a standstill and triggered the rise of economic nationalism.
- 3. Daily Nationalism:** The COVID-19 Pandemic crisis led to an increase in daily nationalist acts and demonstrations as well. It affected all parts of society and caused nationalistic and xenophobic feelings to be renewed in some countries. As COVID-19 Pandemic wreaked havoc in European countries, numerous racist, xenophobic, discriminating and intolerant incidents took place. Chinese citizens were targeted with verbal

and physical attacks. According to the report of European Union Agency for Fundamental Rights (FRA) on COVID-19, people with Asian features in Denmark, Italy, France, Germany, Finland and Estonia experienced many discriminatory and xenophobic events such as being called names, being the target of stares and being isolated by others.

CRISIS MANAGEMENT AND POPULIST DISCOURSE

“Crisis communication has a variety of goals, which are not restricted to limiting reputation damage, some of the most important being: reducing harm, reestablishing public order and protecting the public.” (Castro, 2021:2) One way of managing the crisis is populist discourse. We have witnessed some EU leaders using populist discourses while trying to manage the COVID-19 crisis. “It is populism which causes COVID-19 to spread, but it adds to populism’s fire” (McKee et al., 2021: 4). Leonhardt and Leatherby, in their article titled, “Where the Virus Is Growing Most: Countries With ‘Illiberal Populist’ Leaders” stated that the common point of Brazil, USA, Russia and UK which are the four big countries in which Coronavirus cases most speedily increased is that they are managed by populist male leaders who regard themselves as elite and anti-establishment advocates. In Britain, Mr. Johnson’s government initially encouraged people to continue socializing, even as other countries were locking down (2020). Kavaklı claims that the number of populist individuals are higher in countries which have the weakest democratic institutions

and higher COVID-19 mortality rates and that they violate democratic norms (2020: 20).

A study which focused on the statements and political initiatives of populist leaders during a four month period from January to May, eight countries were analyzed. According to the study, spread of COVID-19 in Spain, Italy, France and UK was at a critical level and these were countries in which populist discourses were quite high regardless of whether they were in power or not. On the other hand, Poland and the Czech Republic were the least affected countries from the pandemic and the populist discourses were few in number. Shortly, this study claimed that there is a parallelism between pandemic rates and populist discourses (Bobba and Hubé, 2021).

The 3rd Article of EU Council's Implementation Decision defines the crisis as follows: "A situation which requires timely political coordination and intervention at the political union level that has a high impact or political importance." European Central Bank's (ECB) President, President of the Euro Group and the High Commissioner, members of the European Council agreed to cooperate in the basic areas mentioned earlier. It was decided to finance the Personal Protective Equipment needed to give support to the struggle against the pandemic by EU funds (Goniewicz et al. 2020:3). In fact, EU prepared many packages at the corporate level, however countries' attitude overshadowed these efforts and EU was highly criticized. However, EU mainly stayed away from developing a rational and uniform strategy against the Coronavirus due to its inner conflicts

(Eralp, 2020:3-4). Lack of solidarity between the EU countries as seen in the act of burning the European flag in the Italy example will cause straying away from the EU identity and adopting national values. Although these crises are a great opportunity to demonstrate for EU that it's "European" identity, the populist discourses of the leaders have sabotaged this (Ünal, 2020). EU's decades of efforts to form an EU identity³ was suddenly faced with the risk of shattering. "Some commentators have suggested that this marks the death knell of European integration, and even the most optimistic of observers recognize it as one of the greatest challenges the EU has ever faced in terms of crisis management and demonstrating supranational added value." (Russack and Blockmans, 2020:1) "The way Europe acts today will determine everyone's post-pandemic future. So far, it is not Europe's finest hour. We see as solidarity becomes a hollow mantra, the EU brand is tarnished" (Islam, 2020).

"Coronavirus has given hope to those who wish to see the EU stumble (Grant, 2020). It was observed that some people expected or almost hoped EU to fall apart and/or to be destroyed during and after the financial crises, refugee crisis, BREXIT and finally the Coronavirus crisis" (Eralp, 2020:1). "The jury is still out on whether the

³ One of the leading efforts is the Erasmus student exchange program. The European identity is especially important for the young generations. It contributes to the development of the European Identity in young people. In the content analysis of the experiences of 2093 Erasmus students from 33 countries, it was concluded that their EU identity developed. See, Mutlu S. (2015). *The Development of European Identity in Erasmus Students: Content Analysis of Experience Stories of Erasmus Students*. **LAP LAMBERT Academic Publishing**.

coronavirus will help make the EU stronger, or break it altogether” (Tocci, 2020).

We are witnessing that EU’s image abroad has been injured as well besides its inner conflicts. “On 27 March 2020, the UK Prime Minister – Boris Johnson announced that he had tested positive for Covid19. Later, on 6 April 2020, he was admitted to the hospital as his condition deteriorated. As the first head of government of a major Western democracy confirmed to be infected with Covid19 and subsequently hospitalized, this was a high-profile incident that caused political uncertainty in the United Kingdom.” (Peng at al., 2020:77). In a study carried out in China on Zhihu users, Prime Minister Boris Johnson was dealt with as a case study during the COVID-19 pandemic and content analysis was done on the users’ thoughts. In this study, it was concluded that Zhihu users had negative perceptions and views on how UK managed the pandemic crisis and the Western democratic systems. This also shows that they did not approve of Western democratic politics (Peng at al., 2020:89). COVID-19 has brought the current state and weaknesses of EU democracy.

WHAT SHOULD EU HAVE DONE?

In the early stages of the pandemic, the timing and variety of political responses to the pandemic in Europe were determined by variables related to social factors such as political institutions, general management capacity, certain health services capacities and organizational regulations, political parties’ ideologies and

preferences, trust between individuals, trust in the government and general freedom level in a given country (Toshkov et al., 2021:2).

It has been seen that there is a need for multi-dimensional policies to fight against the pandemic (Koç and Saraç, 2020:1-2). “Decisions should be made in favor of public health, not on political or economic imperatives. Unfortunately, many decisions made during the current crisis were focused more on political and economic considerations rather than public safety and security.” (Goniewicz et al. 2020:8) However, this can be turned into an advantage and “EU democracy can benefit from these hard times and form a closer relationship between EU and its citizens” (Movarelli, 2020:180).

Toshkov et al., who indicate that how governments react to the pandemic is a function of public management capacities and characteristics which are effective today, list their conclusion as follows (2021:5-10):

1. **General governance capacity:** In order to adopt the suitable policy precautions to fight against the crisis, governments need to have the capacity to identify threats against preventive health services, monitor the progress of the pandemic and collect sufficient data to evaluate the risks and possible effects of different possible reactions of politics.
2. **Crisis management capacity:** Governments need to include the suggestions of external experts regularly in the beginning of the decision making process.

3. **Health care capacity and organization:** The general administration should be prepared in its capacity for (health) crises. In particular, the focus should be on how the health sector management is organized and represented within the governmental organizational structure, whether the sector is represented in the Cabinet by a medical expert, its capacity (hospital beds and intensive care hospitals, nurses and doctors) and financing.
4. **Political institutions:** The next factor group we have considered is related to political organizations and especially the vertical distribution of power within the state and the type of legislative power. We are expecting federal and non-central countries to give slower initial reactions to the Coronavirus crisis.
5. **Government type:** It is related to the type of government due to the number of parties in the government (one of them for a single part Cabinet and more than one for a coalition). With a higher number of coalition members, it will be difficult to decide on a consensus policy and more negotiations will take place and might result in a deadlock.
6. **Party-political ideology:** We are expecting parties with more traditional, authoritative and nationalistic values in their ideology to take speedier and stricter precautions. These types of parties believe that the state has the authority to rule the public and are generally willing to limit individual freedoms and rights for the benefit of the public. These parties have a tendency to expand and centralize the power of the state in general and

therefore take in particular emergency measures to fight against crises.

7. **Societal factors:** The last factor group is related to social values and countries' general freedom. It is estimated that freer countries' possibility of taking more limiting precautions imposed by their governments will be lower. In such countries, individual and social freedoms and rights are valued, respected and protected by the civil society. Governments are faced with legitimizing the temporary and partial limitations on their basic movement and organization right and higher thresholds to implement these.

When all of these evaluations are taken into consideration, all countries will be able to fight against the pandemic crises in a more successful manner.

PANDEMIC MANAGEMENT IN TURKEY

It can be stated that the management of the first wave of COVID-19 Pandemic in Turkey was more successful. "Turkey has followed in its fight with the COVID19 pandemic has been carried out within the framework of a model which is based on coordination and governance principles. The COVID19 pandemic has revealed, once again, the importance of state capacity, trust and good governance, as well as effectiveness of the health system and strength of health infrastructure as effective factors in combating crises" (Ateş and Kırılmaz, 2021: 34). "In terms of taking precautions in their related area and working

in cooperation with other Ministries, a negative picture has not been observed for Ministries during the spread of the pandemic in Turkey. The sufficient number of beds and health personnel in the hospitals, plundering and food stocking incidents not taking place can be taken as signs that the process is being managed successfully in a country during a global and national time of crisis. In this respect, it would not be wrong to say that the Ministries have been successful in their crisis management” (Erdem, 2020:384).

In Turkey, the Coronavirus Scientific Board was founded on 10 January, 2020, two months before the first case was seen in the country. Thus, a board consisting of experts started following and evaluating the global pandemic. In cases where the highest number of patients were reached, the government has approved of and implemented numerous decisions taken by this board. Since the first day on which the first COVID-19 case was announced in Turkey, filiation activities have been carried out for the cases, a dissemination map has been prepared and these precautions have been successful in decreasing the number of COVID-19 cases. In 81 cities in Turkey, contacted people were reached through mobile devices when a COVID-19 case was identified and the filiation process was carried out with the FITAS application. The medication of the individuals whose tests came out positive were taken directly to their homes, preventing more spread of the virus and the treatment of people in the risk group was started with early diagnosis (Presidency, Directorate of Communication 2021: 28).

“During the first wave of the COVID-19 Pandemic, Turkey has been successful in terms of public management although there were areas which needed improvement. On the other hand, as an example of medium level success, the number of COVID-19 deaths in millions in Turkey has been much lower (47) compared to countries such as the USA (257), Iran (81), Germany (94), France (415), Italy (514) and UK (489)” (Yıldız and Şahin, 2020: 401-402).

As for data related to Coronavirus cases and deaths, according to data dated 19 June, 2021 which World Health Organization publishes daily, Turkey has the 7th place among the OECD countries in terms of number of COVID-19 cases; second in number of deaths; 29th with 26,5 deaths in patient death speed as the number of cases decreased to 1,000 and 19th with 60 deaths per a population of 1.000.000” (Koç and Saraç, 2020:4-5). It is seen that Turkey has displayed a better performance during the pandemic in terms of its socio-economic and health services capacity (Budak and Korkmaz, 2020: 76). Turkey’s health system has not been faced with the risk of collapsing since it’s the system is strong. “Turkey with its number of intensive care hospital beds in 100 thousand people is in a much better state compared to many developed countries such as UK, Germany and France. While the number of intensive care beds in Turkey in 100 thousand people is 56,9, this number of 33,9 for Germany; 9,5 for Spain; 8,4 for Italy; 8,2 in France and 6,2 in UK” (Presidency, Directorate of Communication 2021: 48). European Union’s President of the Turkish Delegation Christian Berger stated in an interview, “We need to strengthen the resilience of our health system. Turkey has

given a very good example; the Turkish health system actually has managed to deal with the crisis quite well, and this because it has a strong health system built over the years” (Daily Sabah, 2020).

Turkey has sent medical aid to countries in need during the first wave of the pandemic. “Turkey has sent aid to a total of 157 countries, 44 of which were in Africa, 43 in Europe, 33 in Asia, 22 in America and 15 in Oceania for different needs” (Presidency, Directorate of Communication, 2021: 11). NATO General Secretary Jens Stoltenberg stated in April 2020 that, Turkey is one of the countries which sent the most aid to its allies and that the military plane which carried medical aid and personal protective equipment to UK used NATO’s single flight number for the first time. WHO Director of the European Region Hans Kluge expressed his thanks to Turkey on behalf of WHO for sending aid to firstly UK, Italy, Spain and the Balkan countries and the cooperation it displayed (Presidency, Directorate of Communication 2021: 28).

2. METHOD

2.1 Study Subject, Purpose and Model

This is a descriptive study. The purpose of this article is to present the view points of the public in the city of Sivas in Turkey on how the first wave (March-June 2020) of the COVID-19 pandemic has been managed in the EU and Turkey in terms of socio-demographic variables.

2.2. Population and Sample

When choosing the sample of the study, it was given care to visit a majority of the neighborhoods in the city to reach as many groups in Sivas as possible. Stratified sampling method was used and a survey was given to 1942 individuals in +18 age group were chosen through the random method in 65 neighborhoods in Sivas city center on 09-15 June, 2020.

2.3. Data Collection Tools and Hypotheses of the Study

The data of the public opinion poll carried out by the Sivas Governorship were used. The survey form consists of three parts as A, B and C and 10 questions.

Table 1: Scope of the Survey

Parts	Content
A- Socio-demographic questions	Gender, marital status, age, income, education and occupation questions
B- Questions related to impact level due to the COVID19 Pandemic	Level of psychological impact, Level of economic impact questions.
C- Questions related to the management of the COVID-19 Pandemic Period	Questions on how the COVID-19 Pandemic period was managed in the USA Questions on how the COVID-19 Pandemic period was managed in Turkey.

Hypotheses of the Study:

H1: There is a significant relationship between the socio-demographic variables and the point of view regarding EU's success in managing the COVID-19 Pandemic period.

H2: There is a significant relationship between the socio-demographic variables and the point of view regarding Turkey's success in managing the COVID-19 Pandemic period.

H3: There is a significant relationship between the view that EU's management of the COVID-19 Pandemic period is successful and the view that Turkey's management of the same period is successful.

2.4. Analysis and Interpretation of the Data

The data obtained from the study were analyzed with the SPSS 18.00 software. With the exception of frequency and percentage distributions, the Chi-square test was used to analyze the hypotheses.

3. FINDINGS AND DISCUSSION

3.1 Frequency Findings

Table 2: The Socio-Demographic Characteristics of the Sample

	Variables	N	%
Gender	Woman	737	38,0
	Male	1205	62,0
Marital status	Single	436	22,5
	The married	1326	68,3
	Single (widowed, divorced)	180	9,3

Age	18-24	248	12,8
	25-34	402	20,7
	35-44	467	24,0
	45-54	542	27,9
	55-64	204	10,5
	Age 65 and over	79	4,1
Educational Level	Uneducated/illiterate	18	0,9
	Primary school	212	10,9
	Secondary education	1083	55,8
	High education	628	32,3
Occupation	Housewife	262	13,5
	Retired	201	10,4
	Tradesman	412	21,2
	Workmen	619	31,9
	Civil servants	258	13,3
	Unemployed	190	9,8
Income Level	Low income	1122	57,8
	Middle income	712	36,7
	High income	108	5,6

38% of the Sivas public who participated in the study is female and 62% is male. 68,3% of the participants is married, 22,5% is single and 9,3% is widowed (individuals who have lost their spouses and living

alone). When we take a look at age distribution, it can be seen that all age groups are represented in a proportional manner. 0,9% of the participants is illiterate, 10,9% is primary school graduates, 55,8% is secondary education graduates and 32,3% is higher education graduates. 13,5% of the participants is housewives, 10,4% is retired, 21,2% is tradesmen, 31,9% is workmen, 13,3% is civil servants and 9,8% is unemployed. When we take a look at income level, 57,8% of the participants has low income, 36,7% has middle income and 5,6% has high income. “Sivas is one of our cities which is among the primary priority provinces for development and does not have a significant contribution to the region it is located in and Turkey’s economy due to both its current socio-economic development level. The economy of the province is generally shaped by agriculture, husbandry, textiles, leather works, mining and minor handicrafts” (Doğan 2007, 41-42). Therefore, the income level of the public in the province is not high.

We grouped individuals with incomes up to 5000TL as the low income group, individuals with incomes between 5000-8000TL as the medium income group and those with incomes of 8001 and higher as the high income group. The poverty threshold in Turkey for a family of four is 9 thousand 331 TL as of June, 2021. According to the exchange rate as of 29 June, 2021 1 Euro= 10, 36 TL.

Table 3: The Frequency Table for Economic and Psychological Impact Levels of The Pandemic Period

	Very negatively affected		Negatively affected		No idea		Positively affected		Very positively affected		Total.	
	N	%	n	%	N	%	n	%	n	%	N	%
How were you affected by the pandemic period economically?	967	49,8	672	34,6	155	8,0	143	7,4	5	0,3	1942	100
How were you affected by the pandemic period psychologically?	1007	51,9	731	37,6	104	5,4	85	4,4	15	,8	1942	100

It can be seen that a majority of the Sivas public who participated in the survey is negatively affected by the pandemic period both economically and psychologically. 49,8% of the Sivas public who participated in the survey has been very negatively affected economically and 51,9% has been very negatively affected psychologically. The rate of being very negatively affected psychologically is higher. If we take a look at being negatively affected in total, it can be seen that 84,4% has been negatively affected economically and 89,5% has been negatively affected psychologically.

Table 4: Frequency Table on Views Regarding How the Pandemic Period Was Managed in EU and Turkey

		How was the pandemic period managed in EU?	How was the pandemic period managed in Turkey?
Very Unsuccessful	n	848	45
	%	43,7	2,3
Unsuccessful	n	822	170
	%	42,3	8,8
No idea	n	88	74
	%	4,5	3,8
Successful	n	165	1053
	%	8,5	54,2
Very Successful	n	19	600
	%	1,0	30,9
Total	N	1942	1942
	%	100	100

43,7% of the Sivas public who participated in the survey thinks that the pandemic period was managed very unsuccessfully in EU, while only 2,3% thinks that it was managed very unsuccessfully in Turkey. As for a total evaluation, 86% thinks that the Pandemic period was managed unsuccessfully in EU and only 11,1% thinks that it was managed unsuccessfully in Turkey. On the other hand, 85,1% of the Sivas public who participated in the survey think that the pandemic period was managed successfully in Turkey, whereas only 9,5% think that it was managed successfully in EU.

3.2 Chi-square Analysis Findings

Table 5: The Chi-Square Analysis Results of the Relationship between the Point of View on EU's Success in Managing the COVID-19 Pandemic Period and Socio-Demographic Variables

Compared variables	n	sd	χ^2	P
Relationship between gender and EU's success in management	1942	4	30,384	0,000
Relationship between age and EU's success in management	1942	20	40,969	0,004
Relationship between marital status and EU's success in management	1942	8	25,710	0,001
Relationship between education level and EU's success in management	1942	12	89,478	0,000
Relationship between occupation and EU's success in management	1942	20	52,653	0,000
Relationship between income and EU's success in management	1942	12	28,039	0,005

A statistically significant relationship was found between gender and successful management of the pandemic in EU (χ^2 : 30,384, sd:4, p: 0.000 < 0.05). 50% and 2 of the women think that the pandemic was managed very unsuccessfully in EU, while this rate in men is 39,7%.

A statistically significant relationship was found between age and successful management of the pandemic in EU (χ^2 : 40,969, sd:20, p: 0.004 < 0.05). When we take a look at the age distribution of individuals who think that the pandemic period was managed very unsuccessfully in EU, it can be seen that the highest rate is in the 45-54 age group (50,6%) and that this rate decreased in the 18-24 age group (38,7%). The rate of the view that the pandemic was managed very unsuccessfully in EU in young people is lower compared to the middle-age group.

A statistically significant relationship was found between marital status and successful management of the pandemic in EU (χ^2 : 25,710, sd:2, p: 0.001 < 0.05). The rate of the view that the pandemic was managed very unsuccessfully in EU is higher in individuals who live alone (58,3%) compared to married (42,1%) and single individuals (42,4%).

A statistically significant relationship was found between education level and successful management of the pandemic in EU (χ^2 : 89,478, sd:8, p: 0.001 < 0.05). The rate of the view that the pandemic was managed very unsuccessfully in EU is lower in higher education graduates (34,9%) compared to middle-education graduates and below (44,3%).

As education level increases, the view that the management of the pandemic was unsuccessful decreases. This data can be explained by individuals with higher education levels having more access to information and a more developed skill in viewing the information they have with different points of view and critically.

A statistically significant relationship was found between occupation and successful management of the pandemic in EU (χ^2 : 52,653, sd:20, p: 0.000 < 0.05). While the rate of the view that the pandemic was managed very unsuccessfully in EU is 34,5% in civil servants, it is 50,4% in women. This can be explained with the education level of the individuals. While 91,1% of the civil servants are higher education graduates, this rate is only 10,3% in housewives.

A statistically significant relationship was found between income and successful management of the pandemic in EU (χ^2 : 28,39, sd:12, p: $0.000 < 0.05$). Since the value observed in the Chi-square analysis was lower than 5 and the number of cells was over 20%, the choices were combined. According to this, the income level was classified as “low income,” “medium income” and “high income.” The rate of individuals who think that the pandemic period was managed very unsuccessfully in EU is 44,4% in the low income group; 41,1% in the medium income group and it is very low in the high income group with 19,6%. Therefore, as income level decreases, the rate of the view that the pandemic period was managed unsuccessfully increases. The results verify H1 hypothesis.

Table 6: The Chi-Square Analysis Results of the Relationship Between the Point of View on Turkey’s Success In Managing the COVID-19 Pandemic Period and Socio-Demographic Variables

Compared variables	n	sd	χ^2	P
Relationship between gender and Turkey’s success in management	1942	4	8,843	0,65
Relationship between age and Turkey’s success in management	1942	20	23,064	0,286
Relationship between marital status and Turkey’s success in management	1942	8	21,681	0,006
Relationship between education level and Turkey’s success in management	1942	12	86,236	0,000
Relationship between occupation and Turkey’s success in management	1942	20	47,451	0,001
Relationship between income and Turkey’s success in management	1942	12	13,273	0,350

A statistically significant relationship was not found between gender and successful management of the pandemic in Turkey (χ^2 : 8,843,

sd:4 p: 0.65 > 0.05). Both genders think that the management of the pandemic period in Turkey was successful.

A statistically significant relationship was not found between age and successful management of the pandemic in Turkey (χ^2 : 23,064, sd:20 p: 0.286 > 0.05). All age groups think that the management of the pandemic period in Turkey was successful.

A statistically significant relationship was found between marital status and successful management of the pandemic in Turkey (χ^2 : 21,681, sd:8 p: 0.006 < 0.05). The rate of individuals who think that the pandemic period was managed very unsuccessfully is higher in people who live alone (16,7%) and single people (12,6%) compared to married people (9,8%). In addition, since the income level of single individuals and individuals who live alone is lower compared to married individuals, it can be stated that their rate of getting affected economically and psychologically is higher. A statistically significant relationship was found between marital status and being affected economically (χ^2 : 33,705, df: 8 p: 0.000 < 0.05). It was observed that 68,9% of the individuals who live alone (with deceased spouses and divorced) were affected economically. This rate is 50,5% in single individuals and 47,0% in married individuals. A statistically significant relationship was found between marital status and being affected psychologically (χ^2 : 37,215, df: 8, p: 0.000 < 0.05). The rate of individuals who live alone being very negatively affected psychologically (67,8%) compared to other individuals. While this rate is 51,1% in single individuals, it is 49,9% in married individuals.

This result can be explained with significant dimensions such as married individuals and single individuals having close relationships with their families, sharing love within their families, receiving social support and raising children.

A statistically significant relationship was found between education level and successful management of the pandemic in Turkey (χ^2 : 86,236, sd:12, p: 0.000 < 0.05). The rate of individuals who think that the pandemic period was managed successfully in Turkey is 83,1% in higher education graduates; 86,2% in middle-school graduates and 88,2% in primary school graduates. As education level increases, the rate of individuals who think that the management of the pandemic period was successful in Turkey decreases.

A statistically significant relationship was not found between occupation and successful management of the pandemic in Turkey (χ^2 : 47,451 sd:20, p: 0.001 < 0.05). It was observed that the rate of individuals who think that the pandemic period was managed very successfully in Turkey is higher in retired individuals, housewives and civil servants compared to other occupation groups.

A statistically significant relationship was found between occupation and being affected economically (χ^2 : 173,984, df:20, p: 0.000 < 0.05). It was observed that the groups which were the very negatively affected economically consists of tradesmen (59%) and laborers (49,9%). Since tradesmen did poor business during the lockdowns and many laborers lost their jobs, it can be claimed that they might be very negatively affected economically.

A statistically significant relationship was found between income and successful management of the pandemic in Turkey (χ^2 : 13,273, sd:12, p: 0.350 > 0.05). It was observed that income level did not have any effect on the view on the level of successful management of the pandemic in Turkey.

With the exception of gender, age and income level variables, H2 hypothesis is verified.

Since the value observed in the Chi-square analysis of the relationship between the level of successful management of the pandemic period in EU and the level of successful management of the pandemic period in Turkey was lower than 5 and the number of cells was over 20%, the choices were combined. According to this, the level successful management of the pandemic period was classified as “Managed Unsuccessfully,” “Managed Neither Successfully nor Unsuccessfully” and “Managed Successfully.”

A statistically significant relationship was found between level of successful management of the pandemic period in Turkey and the level of successful management of the pandemic in EU (χ^2 : 299,854, df: 4, p: 0.000 <0.05). 85,5% of the individuals who think that the pandemic period was managed unsuccessfully in EU think that it was managed successfully in Turkey.

The results verify H3 hypothesis.

CONCLUSSION

The results obtained in this study belong to the first wave of the COID-19 Pandemic (March- June 2020).

In this study, it was concluded that a majority of the Sivas public who participated in the survey was negatively affected from the pandemic period economically and psychologically (Table 3), found the management of the pandemic period unsuccessful in EU and successful in Turkey (Table 4) and that this point of view created significant differences in many points according to the socio-demographic variables (Tables 5 and 6). A statistically significant relationship was found between the success level of the management of the pandemic period in Turkey and the success level of the management of the pandemic period in EU. It was determined that 85,5% of the individuals who found the pandemic management unsuccessful in EU found its management successful in Turkey.

It was concluded that the most important demographic variable was education level. It was observed that as education level increases, the rate of individuals who think that the management of the pandemic period in Turkey was successful decreased, where as the rate of individuals who think that it was successfully managed in EU increased. This can be explained by the fact that individuals with high education levels are both more willing to access information and have more opportunities to access information, might be more careful in analyzing the reliability of sources of information and might be more critical towards the information they obtain. Another noteworthy

variable was age. The rate of finding the management of the pandemic period in EU very unsuccessful in young people or the Z generation is lower compared to the middle age group. This result can be explained by this generation's analytical and quick thinking methods, extremely self-confidence and having a free spirit.

A striking finding of the study is that, although the Sivas public who participated in the survey was very negatively affected by the pandemic period economically and psychologically, they think that this period was managed very successfully in Turkey and unsuccessfully in EU. This can be discussed in two dimensions. Why do they think that it was managed successfully in Turkey and why do they think that it was managed unsuccessfully in EU?

It can be stated that the most important factor behind the view that it was managed unsuccessfully in EU is social, written and visual media. During the time people were isolated in their homes in the COVID-19 Pandemic, it has been observed that they used TV and in particular Internet data based communication tools to acquire information about the pandemic period very actively. It is especially noteworthy that messages spread and information is distributed over social media. Countries have shared the policies they followed during the pandemic and data related to their policies on their official social media accounts (Facebook, YouTube and Twitter, etc.) Public organizations used social media more actively during the pandemic period and speedily transmitted their messages and activities to their target groups.

The Sivas public closely followed the process during which they were isolated at home over social media and in particular over Turkish TV channels and observed how America, EU member countries and in particular UK fought against the pandemic. The extremely high daily case and death numbers as a consequence of UK's initial "herd immunity" policy and Italy's late precautions have been effective in giving rise to the view that this period has been managed unsuccessfully in EU.

As Turkey took strict precautions after the first case was reported, the daily case and death numbers were initially quite low. On the other hand, the number of daily cases and deaths in Italy, UK and France reflected in the press were very high. For instance, on 1 April, 2020, the number of deaths in France was 508, 730 in Italy (www.worldometers) and 672 in UK (CSSEGISandData/COVID19), it was 63 in Turkey (saglik.gov.tr). It can be suggested that the posting of a video in which an Italian doctor expressed, "Now I have to choose patients and prefer young ones instead of old people since there are no beds in the intensive care unit anymore,"⁴ and the news about old patients being left to their fate in nursing homes in UK have influenced the point of view of the Sivas public who participated in the survey that the pandemic period was managed very unsuccessfully in EU.

In addition, the difficult in obtaining materials such as masks, disinfectants and jumpsuits in the USA and many EU countries and

⁴ <https://www.youtube.com/watch?v=MQv2Jf3ct4s>

the competition among the EU countries to obtain masks were striking pieces of news reflected by the media. Bulgaria's Minister of Defense Krasimir stated that Turkey sent protective equipment against the spread of COVID-19 and not one mask was sent from European countries (Haber 7, 21 March, 2020). It can be stated that, Turkey's medical equipment aid to 44 countries during the pandemic period and news about this aid being shared on Turkish media as well foreign media (Wasilewski, 2020) and the "Corona diplomacy" implemented by Ankara during the pandemic being shown on some media channels as an indication of the global power status of Turkey (Gülseven, 2021: 58-59) have contributed to the view of the Sivas public who participated in the survey that the pandemic period was managed very unsuccessfully in EU and very successfully in Turkey. Although EU has taken some positive steps in the fight against the spread of the virus and to rebuild solidarity and cooperation to enliven economy, these were not given much place on media and even if they appeared on media, they did not raise much interest. Generally, negative events are more interesting and media is really successful in turning them into interesting pieces of news. The people in Sivas remember patients waiting and even dying in the corridors of the hospitals in Italy and the old people left to their fate in nurseries in France and UK.

The reasons why the Sivas public think that the pandemic period was managed very successfully in Turkey can be summarized as follows. The successful management of the COVID-19 crisis in Turkey (in the first wave) and taking strict and quick precautions which resulted in

lower case and death numbers compared to many EU countries and the USA can be shown as the most important reason.

The role of communication in crisis management is extremely important. The content analysis of tweets shared by The Republic of Turkey's Presidency Directorate of Communication and the President of the Directorate Altun on 12 March-01 June, 2020 on their Twitter accounts has been done (Mutluer, Bal, 2020). The tweets shared by Fahrettin Altun reflected a sense of trust, being in safe hands, selflessness and not being aloof. It was emphasized that the Turkish government has had numerous applications in the national and international levels which can be taken as examples in terms of the fight against COVID-19. Altun's tweets in general give the message that the coronavirus crisis can be overcome by the generosity and common sense of the public and that this fight against the crisis will be a leading example in terms of the global public health efforts. Altun's tweets shared on his Twitter account during the fight against the COVID-19 pandemic reflect content which bring the government's attitude and behaviors to the fore (Mutluer, Bal, 2020).

We can state that the Turkish public in general and a majority of the public in Sivas have a traditional structure, world view and life-style is another reason that has contributed to the view of the Sivas public who participated in the survey that the pandemic period was managed successfully in Turkey. President Recep Tayyip Erdoğan's "We are enough for each other my Turkey" campaign has triggered a spirit of unity and solidarity in the nation. Although this was a campaign to

raise funds, Durkheim's collective consciousness and solidarity dimensions was more in the foreground. Within the scope of the campaign, the importance of national unity and solidarity has been integrated with the healing power of music in the pandemic period and a song titled "Song of unity, Solidarity and Fellowship" was composed. The song was published on the digital media channels. In addition, a letter carrying the President's signature was sent to 22 million homes and the struggle against COVID-19 was explained. Triggering of a traditional structure and a spirit of unity and solidarity has allowed a positive view that the pandemic period in Turkey was managed successfully despite the negative economic and psychological effects of the pandemic.

Another reason is that the environment where international cooperation could not be achieved in the fight against the COVID-19 pandemic has created a foundation for individuals to compare their country with other world countries. When we take into consideration that the pandemic triggered nationalism and that Turkey has not been accepted as a member to EU for the last sixty-two years, we can empathize with the Sivas public as to why they think that the pandemic period was managed more successfully by their own country.

FINAL WORDS

This study was carried out during the first wave of the COVID-19 Pandemic (March-June 2020). Different results can be reached in the study in future waves of the pandemic. The view point of EU citizens

about how the first wave of the pandemic was managed in EU can be studied and the results can be compared with the findings of this study.

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CHAPTER 6
THE EFFECT OF COVID-19 ON SHOPPING HABITS IN
E-COMMERCE

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INTRODUCTION

With the 1990s when the internet revolution started and the communication channels moved from local to global scale in the following years, it seems that local commercial markets started to move to the digital internet environment, especially in the 2000s. This situation shows that local individuals, small and medium-sized enterprises have the opportunity to enter new markets and the existing trade has begun to be transferred to the digital environment. It started to adapt to new trends in the legal infrastructure in the following years, especially with the logistics, banking, software, internet and communication infrastructures, computer and mobile phone technologies that started to develop simultaneously with the second half of the 1990s and the beginning of the 2000s.

The process created and legally supported by technological development, especially Industry 4.0, artificial intelligence, Internet 2.0 and the widespread use of devices such as smart phones, mobile phones, tablets rather than individual computers (PC-Personal Computer) in 2010 and later, as well as social media networks. New areas of interaction have emerged and the interaction in e-commerce has increased.

Technological developments, especially in the field of mobile communication, provide faster and safer data transfers with 4G - 5G - 6G and satellite technologies (the use of more compact, cheaper and more convenient mixed satellite rather than military or civilian use - Starlink Project). Now, almost every e-commerce transaction is

carried out easily with the phones that people carry, and we see that the capacities of the vehicles used, battery usage, are developed and increased in accordance with mobile use.

The 2010s led to the need that e-commerce should be done safely and faster, and that communication channels should be open in every popular medium (e-mail, twitter, Instagram, etc.). Of course, this situation has led to the opening of sales channels from corporate companies and individuals to direct end users more than B2B with mixed systems, and the trade volume has evolved since the 2000s and has become more complex and higher standards, and legal regulations have to be created especially for individual consumers. In addition, while companies receive feedback in the legal infrastructure, since this information belongs to individuals, legal arrangements have been made regarding the protection of individual rights. The reason for this situation has been shaped by the complaints / feedbacks and individuals by questioning the issue of trust in trade.

1. TRADE CHANGES IN THE WORLD WITH THE LATEST DEVELOPMENTS IN TECHNOLOGY

1.1. What is E-Commerce (Electronic Commerce) and how it works and develops?

Many states and international organizations have made definitions about e-commerce. Some of the examples are as follows.

E-Commerce OECD (2019) Selling or buying products and services over computer networks through methods specifically designed for the

purpose of taking or placing orders (OECD, 2019). China E-commerce Law (China, 2018) Activities for the sale of products or services through the Internet and other information networks (OECD, 2019).

US Statistic Bureau defines, Sale of products and services ordered by the buyer or negotiated the price and terms of a sale over the Internet, mobile device (m-commerce), extranet, electronic data exchange (EDI), electronic mail or other comparable online systems (OECD, 2019)

Selling or buying products or services between businesses, households, individuals or private institutions through electronic transactions via the Eurostat Internet or other computerized networks (online communication) (European Commission; OECD, 2017).

Turkey Law No. 6563 on the Regulation of Electronic Commerce, All kinds of online economic and commercial activities carried out in electronic environment without physical confrontation.

As can be understood from the definitions made, the main feature that distinguishes e-commerce from other trading methods is that “the parties make the sale or purchase of a product or service via the internet without coming together physically”. There are two points worth explaining here. The product or service purchased in e-commerce can be purchased physically as well as online. Another important point is that the payment can be made when completing the online order or in cash.

In short, the wide choice it offers has made it inclusive. With the e-commerce method, products and services can be exchanged between different segments. These are business to consumer (B2C), business to business (B2B), consumer to consumer (C2C), business to government (business to government-B2G), etc. can happen. As time passes, new methods, new parties or simplified hybrid platforms may emerge. For example, from farmer to consumer (F2C) or from farmer to business to consumer (F2B2C) are some of these new methods. As the parties differ, the type, size, etc. of the tradable product and service. can differ. As we mentioned in the introduction, this happens through Industry 4.0 and artificial intelligence systems and the Internet of Things. For example, the amount of processed products in B2B trade is much higher than in B2C trade, and more used products are traded in C2C trade. Retail e-commerce is mostly considered within the scope of B2C. In addition to product sales, B2C includes accommodation and ticket sales, and payments for compulsory needs such as electricity and water (OECD, 2019).

Today, people and businesses that want to sell products on the internet with e-commerce have the opportunity to sell by establishing an e-commerce site or e-commerce marketplace platforms to meet the Consumer, there are no restrictions (E-Ticaret Bilgi Bankası, 2021). So far, we have briefly examined the status of the infrastructure related to e-commerce, but let's examine how E-Commerce has evolved and how its effects have been under the pandemic conditions we are living.

1.2. Developments In E-Commerce In The World And In Our Country During The Covid -19 Pandemic Period

The Covid -19 epidemic, which was defined in Wuhan, China on November 1, 2019 and spread all over the world, officially called the Pandemic on March 11, 2020 in Turkey, brings curfew and certain restrictions to the agenda due to the security danger of people living in the world. Basic needs and commercial activities have accelerated the transition to safer E-Commerce systems, and human usage times and habits have changed. This situation has transformed the understanding of shopping, especially with the large populations who have to work at home, turning to secure systems with infrastructure in almost every subject and the formation of new structures. With the restrictions, more products find a place in more E-Commerce markets compared to previous years, and since the basic needs on a local scale are closed, including the markets that are being met, these needs have become widespread through Global and Local E-Commerce portals. Of course, the advanced level of technological developments in mobile phones and communication technologies has facilitated this situation. In addition, a new segment of white-collar workers who work individually from home and buy and sell products has emerged, and this situation has been further developed with new ideas in regions where infrastructure is deemed sufficient.

Changes in traffic and habits, intensified by the effect of the pandemic, have led to the infrastructural arrangements that we will list below and the improvement of existing systems.

- Accelerating the digitization of cargo, storage, logistics infrastructures.
- System integrations with robotics and artificial intelligence software, and use and evaluation of all data and production through a single system.
- Increasing the capacity of online payment systems and increasing software security, especially in the field of Banking and Finance, Increasing mobile software security.
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- Formation of new sectors based on need and integration with digital infrastructures (such as Fresh Vegetables and Fruits).
- When working from home, state and private sector companies have to switch to remote access models and apply mixed systems.
- Education etc. Supporting the fields with online systems, the need for instant communication systems to provide higher quality services (Zoom example), and the development of mixed systems in areas such as business and education in post-pandemic planning in order to provide uninterrupted education.
- Implementation of systems such as Contactless Payment or contactless delivery in Cargo and Logistics.
- Expanding the use of unmanned vehicles (For example, expanding and developing drone deliveries and technology).

- Expanding map and geolocation systems and improving instant information flows on portable devices by creating virtual networks.
- Creating and developing infrastructures for the integration of social media channels and the rapid, instant and healthy flow of information from a single source (for example, Online Help).
- Reconsideration and restructuring of existing legal infrastructures for new remote work or hybrid work systems.
- All online markets can be ordered and accessible from anywhere in the world by increasing communication and digitalization opportunities.
- Providing faster data transfer with 4G-5G and satellite technologies and realizing instant information access to more mobile and portable devices.
- In addition to communication, the necessity of establishing sustainable continuous energy production technologies and structures that will provide continuous, uninterrupted and unlimited green energy.
- Government and private companies operating in B2B can now reach individuals as a market, which has brought up the necessity of infrastructural revision of personal customization opportunities in the working systems of factories and investments in artificial intelligence and industry 4.0. (Chevrolet and Arçelik factories and warehouses).

- Widespread use of digital money (legal infrastructure is required – it is not safe today).

1.3. Features of E-Commerce Applications That Change Habits During the Pandemic Period

There are certain features of E-Commerce applications, especially during the Pandemic period that change habits.

- Easy to use on portable devices.
- Reliability of the companies and platforms from which the service is received and the abundance of payment options (Meal cards, use of credit cards, electronic money validity, etc.).
- Fast and predictable service.
- Offering options such as fast and slow with alternative prices on delivery.
- Clear and clear indication of product quality.
- Especially for the new generation, it is preferred to use technology in a way that can provide almost any kind of return.
- Using online banking systems as security at the highest level for the protection of consumers and payments by service providers or platforms.
- Stock etc. Their status is visible in the system.
- In addition, the necessary work areas for the formation of a service at this speed and quality can be listed as follows.
- Integrated storage and logistics systems that provide data with artificial intelligence with Industry 4.0.

- Safe and Fast Bank and Payment systems.
- Easy to use, accessible software interfaces.
- All reverse information flows, including social media, are open for any problem, suggestion, opinion.
- Being a Platform based on transparent data.
- The production details and contents of environmentally friendly and especially packaged and wet foods can be explained in the most detailed way.
- Easy adaptation to portable system.
- Its capital and commercial history can be explained transparently both as an individual and as an institution.

As such, we can consider e-commerce infrastructures sectorally with examples.

If we examine the Migros Virtual Market and Getir E-Commerce platforms, which are the pioneers in Market products and Food Supply in Turkey; the availability of all the product variety available in the markets on both platforms, the secure way of making payment systems at the door or online in both ways, as well as specifying the estimated delivery times after the order or satellite tracking locally in the software, as well as free change or money in wrong product deliveries. The fact that they have return systems, campaigns for products specially for the Pandemic period, outside the markets, and product sales with serious advantages are among the factors that make them stand out in this field (Migros, 2021; Getir, 2021).

In addition, US Amazon.com and China Alibaba.com E-Commerce platforms are platforms where all products with industrial production can be traded in the global arena. Companies, which are among the first initiatives on a global scale, have come to the fore to purchase Ships in order to reduce their logistics dependencies and cost controls apart from their own automation systems. In this way, they both reduce their dependency by creating different logistics solutions in both wholesale and retail sales, and at the same time, they can create alternatives with different price categories and travel times. Global companies can reduce costs by producing different solutions from low-income countries to high-income countries with such alternatives, and while maintaining the total quality, customer satisfaction increases by reducing costs at the same time (Amazon, 2021; alibaba.com, 2021).

Again, Amazon company introduced new technologies into our lives by integrating drone technology into local delivery vehicles and contactless Payment systems for deliveries at the door (Amazon, 2021; alibaba.com, 2021).

The American Chevrolet company can allow car sales, personalization of products and selection of accessories through the E-Commerce platform during the production phase of the products, and also determine the payment and credit terms. In this way, you can determine the equipment of your vehicle yourself, you can also determine and order the vehicle before it is produced, and they can send you the estimated production and delivery times to your door.

Before the pandemic, we were making vehicle purchases in the Showroom environment, and this and similar systems were not in question (Chevrolet, 2021).

E-Commerce Platforms in terms of employment It is seen that the number of employees in the flexible system with insurance in the Chinese social security system has reached 200 million. Covid-19 has revealed many employment areas based on the digital economy. Online car rental and chauffeur, motor courier etc. It is seen that it contributes to the re-revision of flexible employment areas such as, the growth of transportation and logistics activities connected to platforms and employment. In total, the flexible employment rate in 2020 has reached 55.68 % of employment in China, and this rate has increased by 11% in 2020. However, employee benefits and compensation provide very little legal protection due to flexible working hours and this area needs to be legally examined and revised (Jun, 2021).

CONCLUSION

With the industrial revolutions that progressed relatively slowly but surely, with 4.0, the interpretation of the Internet of Things and Big data activities and the integration of artificial intelligence systems were spreading to the entire society through E-Commerce. Together with the curfews that came with the Covid-19 / Pandemic, the use of E-Commerce systems has increased by 66% between 2019 and 2020 in Turkey, with both the intensity of use and ease of use, and through

healthy and fast infrastructures, and 27% worldwide (Statistica, 2021).

Today, with the use of e-commerce, especially with the accelerating effect of the pandemic, large investments have been made in the sector in the last 1 year, both rationally and financially. In addition, although the digitalization of money started with the use of credit cards, if the legal infrastructure and reliability of digital money are brought to a level that can be controlled by both states and international organizations, full financial integration of the system will be achieved both locally and globally (Ertekin, 2017; Yagci M., 2019; Elektronik Ticaret, 2021; O., 2021).

The COVID-19 pandemic or coronavirus pandemic started with the virus epidemic that emerged in Wuhan, the capital of the Hubei province of China on 1st December 2019, and was announced by the Ministry of Health on March 11, 2020, where the first case was seen in our country. With the rapid spread of the epidemic in the world, general and partial closures in countries, travel restrictions, the start of the work from home system and distance education, people had to get their food they need and other needs online systems. Even the closures have pushed people to meet their food needs by cooking them at home. As a requirement of our age and the Pandemic, progress in informatics and technological developments have created the habit of using digital and online environments for shopping, and also changed the consumption habits in e-commerce. The pandemic also changed the order day and time interval in e-commerce. While

the most ordered day and time range before the pandemic was 16:00-17:00 on Sunday, the most ordered day and time interval after the pandemic was 21:00-22:00 on Thursday. In this context, investment in mobile applications or sites there was an 8% increase in the number of visitors and a 22% increase in the purchase rate. Since March, even people who have never experienced online shopping have used e-commerce, especially in the food sector. With the restrictions that came with the pandemic, consumers mostly preferred pulses, pasta, bread and canned products as food products. In the cleaning and hygiene categories, where the demand is always high, online sales have increased greatly during the corona virus process. In March; sales of disinfectant products changed by 5413%, wet wipes by 55% and gloves by 286%. Consumers who turned to online shopping to meet their basic needs have embraced contactless and secure e-commerce. Realizing that there was a gap in the sector, many physical market chains transitioned to e-commerce.

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CHAPTER 7

THE GLOBAL IMPACT OF COVID-19 IN THE BUSINESS SECTOR

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INTRODUCTION

The impact of the Global Pandemic Crises – SARS COVID-19 had change the global economy because of the Quarantine Protocols which set by the World Health Organization (WHO). Most of the business sectors had rapidly shifted to digital transactions and part of the challenges encountered is the interconnectivity of all transactions using the digital technology using Online Transactions such as E-Commerce and E-Business. Researchers have highlighted the use of Digital Technologies (DT) in enhancing productivity and performance in the Economic Sector. However, there is partial evidence on the use of Digital Technology for dealing with the COVID-19, (Papadopoulos et al., 2020, p. 102192). The pandemic has forced many business sectors to undergo significant transformation of their business processes and use of digital technology to maintain operations whilst adhering new guidelines and procedures, (Dwivedi et al., 2020, p. 102211).

The absence and non-adoption of digital technologies most business sectors explain why business activities in most industries they shutdown their operations and the implement different quarantine protocols. The strategies to survive the which is so called 'new normal' was imposed by COVID-19 Task Force includes a successful adoption of digital technologies, (Akpan et al., 2020, p. 7). The digital technology can mitigate the difficulties and strengthen the resiliency and preparedness of business sectors in the future, (Wuest, 2020) .In the Philippines there are so many establishments that were already

closed because of the recent impact of the quarantine protocol which is no persons are allowed to go inside the mall. The Researcher is planning to come up with solutions or framework to lessen the burden of business sectors using digital technology one good solution is to develop a huge firewall and servers that can control and manage the connectivity of the Internet during the New Normal. Using this equipment will safeguard and balance the digital transactions in the Business Sector. Even educational sectors introduced notably the implementation of digital technologies in education and health, the increased use of work from home in many industries and a reduction in environmentally harmful in behavior and decrease in pollution levels, (Fenwick et al., 2020, p. 144) .

Objectives:

1. Increase in remote working or collaboration
2. Increasing customer demand for online purchasing / services
3. Increasing use of advanced technologies in business operations
4. Increasing use of advanced technologies in business decision making

Methodology:

The Researcher conducted an online survey between March 16 to March 24, 2021 using Google Form. There are around 50 respondents coming from the different business sectors. The data was gathered and interpreted using Quantitative Research Design which focuses using graphical chart.

Result and Discussions:

Increase in remote working or collaboration

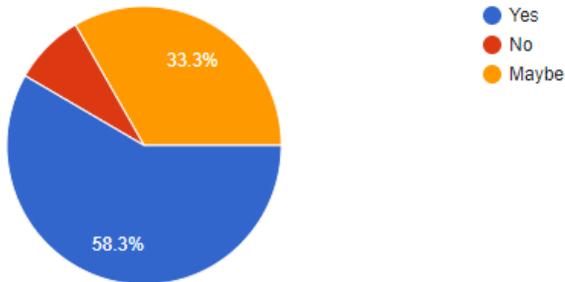


Figure 1: Increase in remote working or collaboration

Figure 1 shows that there are 58.3 percent increase in remote working or collaboration specially in this time of pandemic. There are 33.3% who answers Maybe there are is an increase in remote working or collaboration.

Increasing customer demand for online purchasing / services

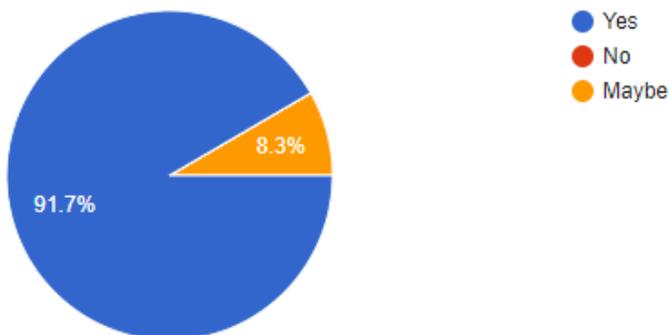


Figure 2. Increasing customer demand for online purchasing / services

Figure 2 shows that there are 91.7 percent increase in customer demand for online purchasing / services in this time of pandemic. There are 3.3% who answers Maybe there are is an increase in customer demand for online purchasing / services.

Increasing use of advanced technologies in business operations

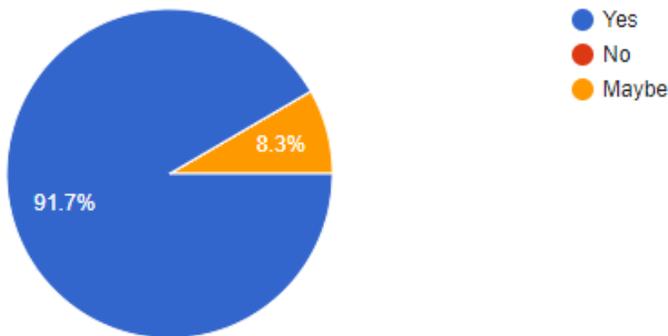


Figure 3. Increasing use of advanced technologies in business operations

Figure 3 shows that there are 91.7 percent increase in advanced technologies in business operations in this time of pandemic. There are 3.3% who answers Maybe there are is an increase in advanced technologies in business operations.

Increasing use of advanced technologies in business decision making

Figure 2:

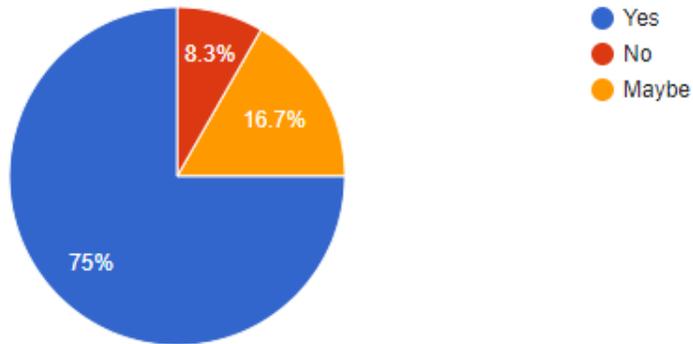


Figure 4. Increasing use of advanced technologies in business decision making

Figure 4 shows that there are 75 percent increase in advanced technologies in business decision in this time of pandemic. There are 16.7% who answers Maybe there are an increase in advanced technologies in business decision and 8.3% answers no an increase in advanced technologies in business decision

Conclusions and Recommendations:

In conclusions the said digital technology implementation is a big factor to increase the economic factors in the business sectors and it is important to adopt changes in the society in order to recover from the global impact of the said pandemic. Furthermore, this is to recommend further study for the enhancement of the said solutions.

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ISBN: 978-625-8423-23-5